ARMSTRONG'S HARMONY for FRETTED INSTRUMENTS

A new system of harmonizing and arranging melodies for Guitar, Hawaiian Guitar, Tenor Banjo, Ukulele, Standard Banjo, Mandolin and all Fretted Instruments.

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FOR

FRETTED INSTRUMENTS

A NEW AND ATTRACTIVE SYSTEM FOR LEARNING THE ART OF HARMONIZING AND ARRANGING MELODIES FOR GUITAR, HAWAIIAN GUITAR, TENOR BANJO, UKULELE, STANDARD BANJO, MANDOLIN AND ALL FRETTED INSTRUMENTS.

BY

THOMAS J. ARMSTRONG

THE VETERAN TEACHER, COMPOSER AND WRITER

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A Happy Climax

The chord of C became a wreck, when E from G did stray.
So D told F, "We must combine and double up with A."

But E found G, and strolling round they ran right into B.
Which made F mad, and taking A he went across to C.

Then G pushed B right up the staff, until they both saw D.
While A became so reconciled he beamed on C and E.

Then B and D and F locked arms, deciding they'd agree.
And all the trouble ended there as you can plainly see.

T. J. A.

Preface

Harmony is an exact science built upon simple rules quite easy to understand. The true meaning of Harmony, as applied to music, signifies the agreeable union of chords to a principal melody or theme.

The laws which govern Harmony have been established through the labors and discoveries of musicians in the past, such as:- Bach, Beethoven, Mozart, Gounod, Mendelssohn and many others whose compositions are still looked upon as masterpieces to be studied and analyzed.

Harmony is divided into two grand divisions called CONSONANT HARMONY and DISSONANCES.

CONSONANT HARMONY deals with such things as intervals, major and minor triads, harmonizing the bass, passing-notes, inversions and harmonizing melodies.

DISSONANCES take in subjects like dominant sevenths, diminished and augmented chords, modulation, counterpoint, form and orchestration.

A vast amount of beautiful work can be accomplished with CONSONANT HARMONY and this part of the study must be thoroughly mastered before taking up DISSONANCES.

One reason for the failure of so many harmony students is because they are too anxious to branch out and use dominant sevenths and other dissonances for adorning their melodies. Such chords cannot be grasped or realized in their true beauty until the student has mastered CONSONANT HARMONY, and if introduced prematurely, their employment depends more on the ear than the eye.

For this reason all the early exercises in this book should be written without the aid of any musical instrument. This is especially true in the exercises on intervals and triads, for these being the very foundation of Harmony, they must be recognized by the eye before hearing them.

When fairly well advanced in the early stages, say up to the first inversion of the bass, the instrument for which this treatise was designed, may play over such exercises that have been written. The transposing work throughout the early examples will make the use of an instrument somewhat attractive.

The student must first of all realize that nothing can be accomplished unless the exercises are carefully written out, as they appear in consecutive order, skipping none so that the elementary work can be mastered quickly.

After that the real beauty of Harmony will be clearly understood, its rules intelligently observed and the apparent labor of writing exercises turned into a pastime that can be enjoyed.

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How To Begin

It is presupposed that anyone taking up a subject like "Harmony," understands the rudiments of music, signatures of major and minor keys and capable of singing or playing a simple melody from a printed score.

In order to secure the full compass needed for illustrating the examples, beginning with open harmony, they are shown in the bass and treble clefs. A knowledge of the bass clef is essential, because it leads up to later transpositions from piano scores to treble clef arrangements for other instruments. Players of fretted instruments should not be dismayed or frightened at the bass clef; its employment here is confined to a little over one octave, and these notes can be easily mastered.

A good plan for preliminary work, in both clefs, is to write out the major and minor scales up to six flats and six sharps; using their proper signatures, designating the various places where semitones occur, and marking the augmented second, of the harmonic minor scale between the 6th and 7th degrees. Blank music paper should be used and all the scales carefully written in ink.

Then comes the study of intervals which may be considered the first step on "Harmony Road." Strange to say this first material offers very few enticements, being dull and seemingly a waste of precious time, yet it is really the chief element needed for everything that follows. No progress can be made without a clear understanding of intervals. Every interval has a specific name which must look right to the eye as well as sound right to the ear. The interval from C to D-sharp is called an augmented second; from C to E-flat is a minor third, yet it sounds the same as the interval from C to D-sharp. The eye must be satisfied regardless of what the ear tells us. If any example in the following exercises directs you to write a minor third interval from C, the proper note for that interval is E-flat, no other note will do at all. A simple rule for classifying intervals will be found among the early exercises, although some ability in writing them must be gained before that rule is fully appreciated. This part of Harmony is the hardest, but when conquered everything afterwards becomes luminous. The true facts about learning intervals may be stated as follows:- They must be written down instead of merely glanced at, their classification precedes chord formation, time spent in the study of intervals is not wasted, and if this part of Harmony is left too soon, for more attractive places in sight, a trip back becomes imperative.

Among The Triads

After becoming familiar with intervals so that they can be instantly recognized, a pleasant change over to "The Triads" may be undertaken with complete safety. A triad is a chord formed of three notes. The basis of all harmony rests on the triad, consequently this section will contain material for building a solid foundation for what is termed "Part writing."

There are just seven triads possible in musical notation. A description of how they are formed will be found in Chapter II, but a complete list of triads is given here to facilitate their recognition. The first letter in each horizontal line gives the name or root of the triad.

A----- C ----- E
B----- D----- F
C----- E----- G
D----- F----- A
E----- G----- B
F----- A----- C
G----- B----- D

The above list merely gives the notes of triads, and says nothing about their character. This will come later. For the present its use may be confined to memorizing the letters of each chord, which is advantageous even at the outset.

Part Writing means exercises written for four voices- Soprano, Alto, Tenor and Bass, a system which has been found the best for revealing chord relation. Triads furnish the material for part writing, and as a triad contains only three notes, one of the notes must be doubled or used twice in the same chord.

Other features come in a natural order, such as:- Melodic Progression, Harmonic Progression, Harmonizing the Bass, Harmonizing the Melody, Inversions of the Bass, Figured Bass, Open Harmony and Dissonances.

It will thus be seen that the course adopted in this treatise is progressive, and if followed as laid out, will enable the student to arrange and correctly harmonize melodies for his instrument.

CHAPTER I

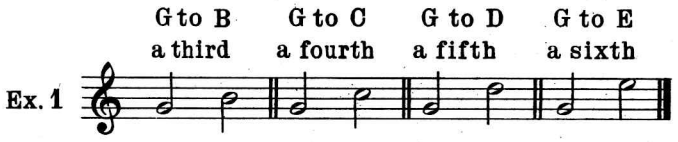
Intervals How To Recognize Them Inverted Intervals
Exercises Building A Scale A Trip Around The Keys

An interval is the distance from one note to another.

Intervals are measured upwards according to the number of degrees they occupy.

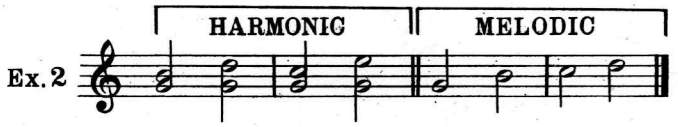
By degrees is meant the lines and spaces of the staff.

The interval from G to B is a third because it occupies three degrees. From G to C is a fourth, from G to D is a fifth and from G to E is a sixth.
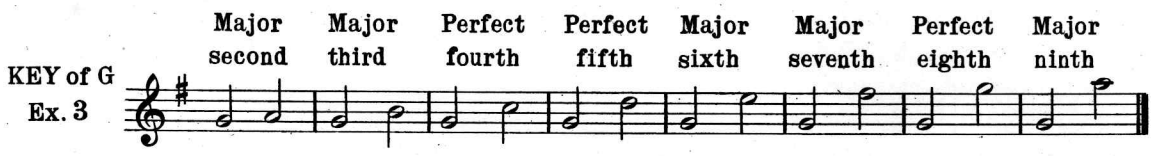


Intervals are harmonic when the notes are played together, as in a chord.

Intervals are melodic when the notes are played separately.
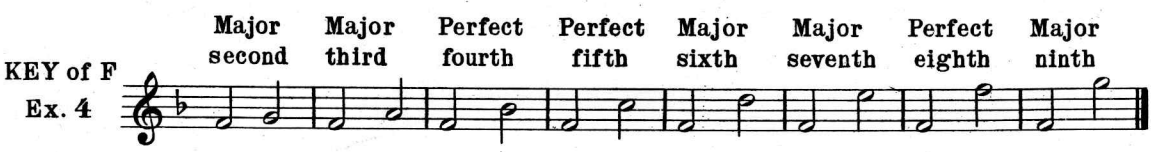


The various intervals are named major, minor, perfect, augmented or diminished, according to their character. Occasionally an interval may be doubly-augmented or doubly-diminished.

From the first note of any major scale to any other note in the same scale the intervals are major, excepting the fourth, fifth and eighth, which are perfect. Later on a reason will be given for naming some intervals major and others perfect.
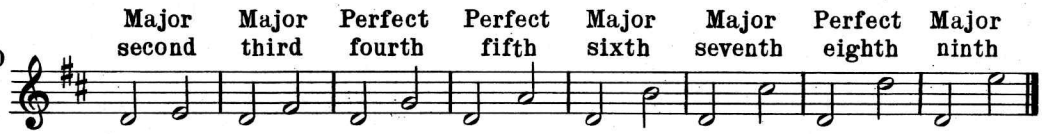


The above should be carefully written out and then transposed to the key of F, thus:-



The intervals previously shown in Example 4, should now be transposed to the key of D, thus:-

KEY of D
Ex. 5



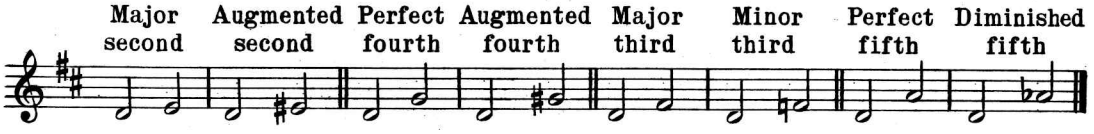
Major intervals and perfect intervals made one half-step larger become augmented. In Example 5 if the second note of any interval were raised a semitone, or the first note lowered a semitone, the interval becomes augmented.

A major interval made one half-step smaller becomes minor.
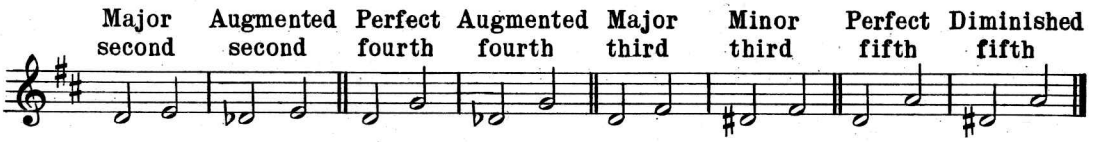
A perfect interval made one half-step smaller becomes diminished.

The following examples in the key of D, should be carefully written out and then transposed to the key of F.

Ex.6

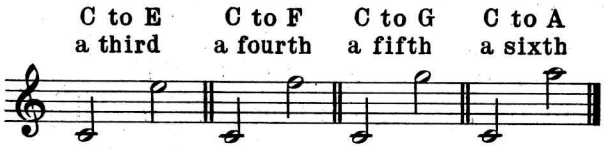


Ex.7



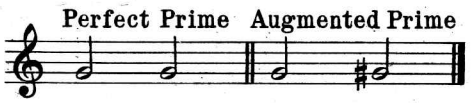
Intervals are generally measured up to ninths, but when larger than a ninth they are considered as if the lower note were placed one octave higher; a tenth would be considered a third, an eleventh a fourth, etc.

Ex.8



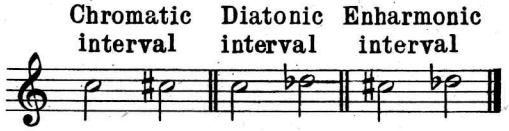
Every interval bears a name in keeping with its character. Even when two notes stand on the same degree, they are classed as an interval, and called a prime. When the second note of a prime is raised a half-step, it becomes an augmented prime.

Ex.9



The augmented prime is a chromatic interval because the notes occupy the same degree. A diatonic interval occupies different degrees. An enharmonic interval is a different notation of the same sound.

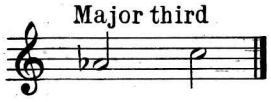
Ex.10



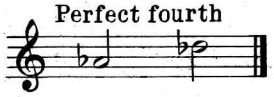
How To Recognize Intervals

RULE- Consider the lower note as the key note of a major scale. If the upper note complies with the key note in forming that scale. the interval is either major or perfect.

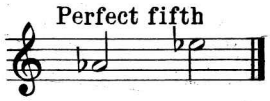
Taking A♭ as the key note, C natural would be the note required for its third.



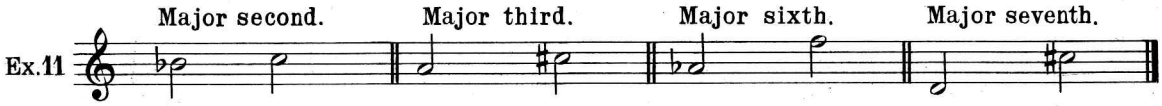
In the same way from A♭ to D♭ is a Perfect fourth, because it agrees with the A♭ scale.



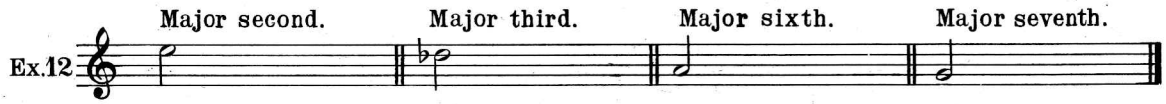
Also from A♭ to E♭ is a Perfect fifth, because E♭ belongs in the scale of A♭.



Remembering the rule given above, it will be found that all the intervals in Example 11 are major:-



Write out the correct upper notes for the intervals mentioned in the following:-

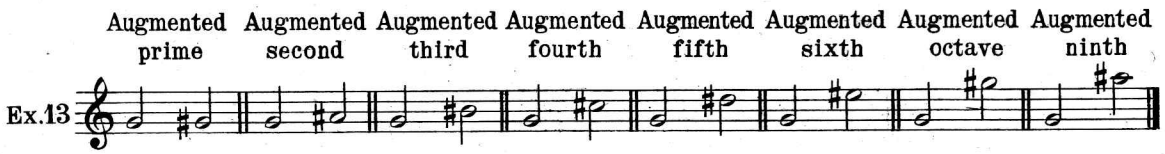


In designating intervals, don't mark on the book page, but draw the full examples on separate blank music paper, placing the correct interval after each note. For a few cents a blank music book may be obtained, where the various exercises can be preserved.

When writing notes above the third line of the staff, point the stems down.  Notes that go below the third line should have their stems run up.  By conforming to this plan a neat appearance results, making the pen work attractive and legible.
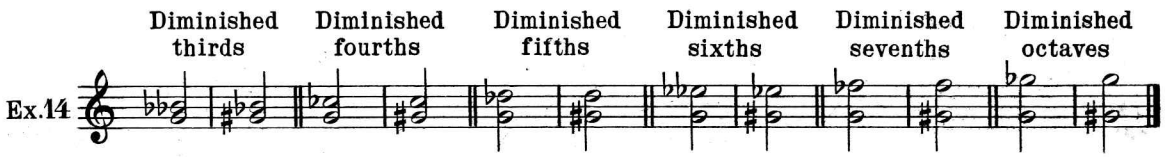
———— * ————

Major intervals and perfect intervals made one half-step larger become augmented.



The augmented seventh is not shown in the above, as it has the character of an enharmonic interval.

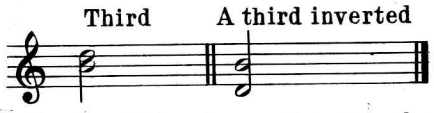
Perfect intervals and minor intervals made one half-step smaller become diminished.



Inverting The Intervals

When the two notes comprising an interval are changed, so that the lowest note becomes the highest, the interval is said to be inverted. This turnover of the two notes alters the name of the interval.

Ex. 15



An inverted third becomes a sixth, as will be observed in the above.

An ingenious method of computing inverted intervals is to think of the figure 9.

An inverted second becomes a seventh 2 and 7 are 9.
An inverted third becomes a sixth 3 and 6 are 9.
An inverted fourth becomes a fifth 4 and 5 are 9.
An inverted fifth becomes a fourth 5 and 4 are 9.
An inverted sixth becomes a third 6 and 3 are 9.
An inverted seventh becomes a second 7 and 2 are 9.
An inverted eighth becomes a prime 8 and 1 are 9.

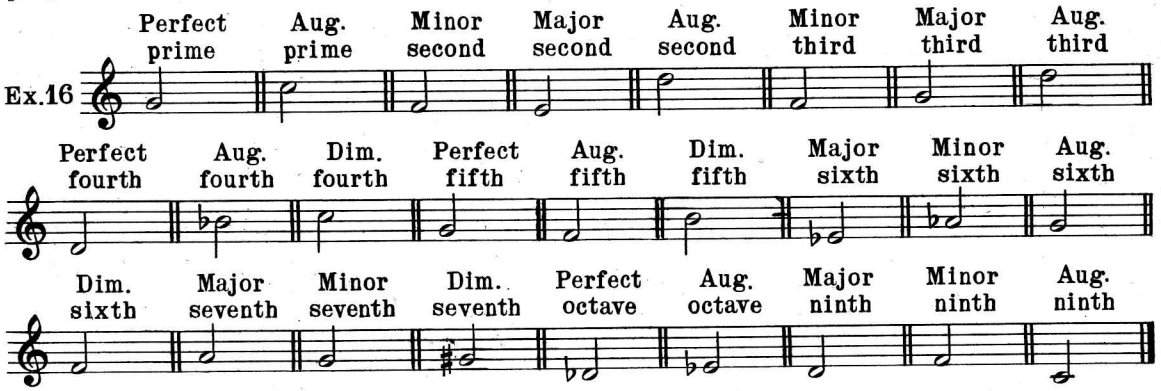
With the exception of those called perfect, all intervals undergo a remarkable change when inverted. Major intervals become minor, minor intervals become major, the diminished interval becomes augmented while the augmented shrinks down to a diminished.

The only intervals that retain their character when inverted are the perfect intervals, and that is one reason why they are termed perfect. The perfect fourth, when inverted, becomes a perfect fifth, the perfect fifth becomes a perfect fourth, and the octave, when inverted, becomes a perfect prime.

Exercises On Intervals

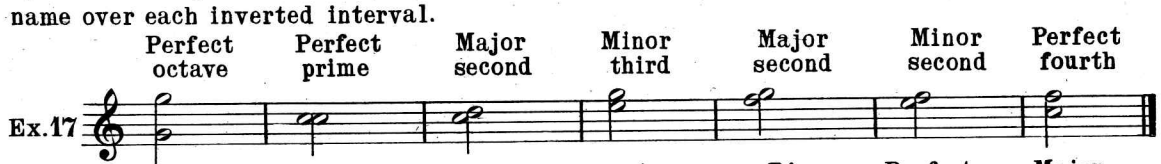
The following exercises must be copied on blank music paper, and after each note write the proper interval needed.

Ex. 16

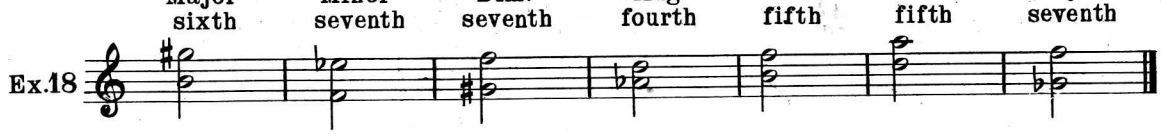


The various intervals shown below are to be inverted. Copy them on music paper leaving a space to the right of each one, so that the change can be written plainly, then mark the new name over each inverted interval.

Ex. 17



Ex. 18



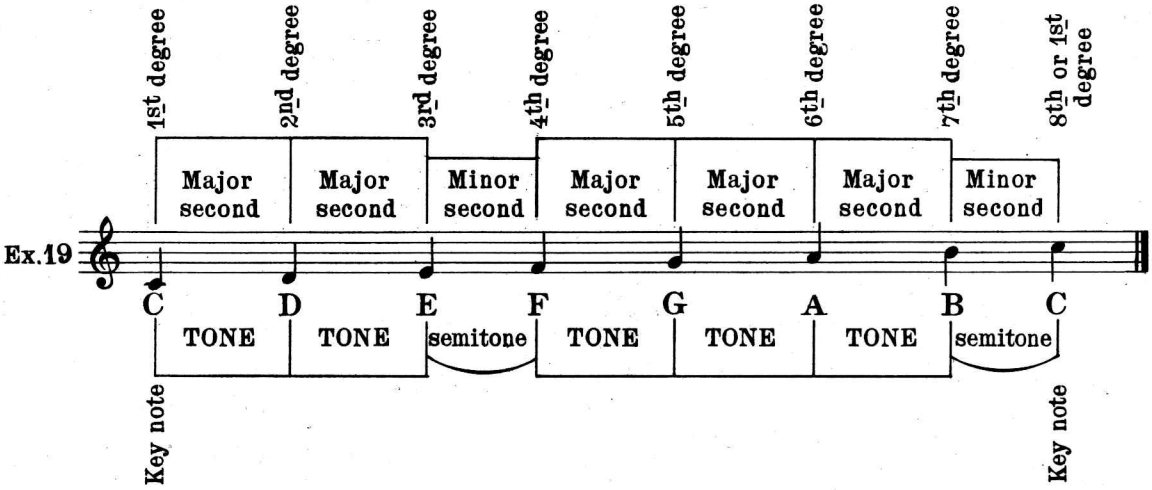
Building A Scale

If the previous exercises have been correctly worked out, it will now be an easy matter to recognize the intervals which enter into the formation of a major scale.

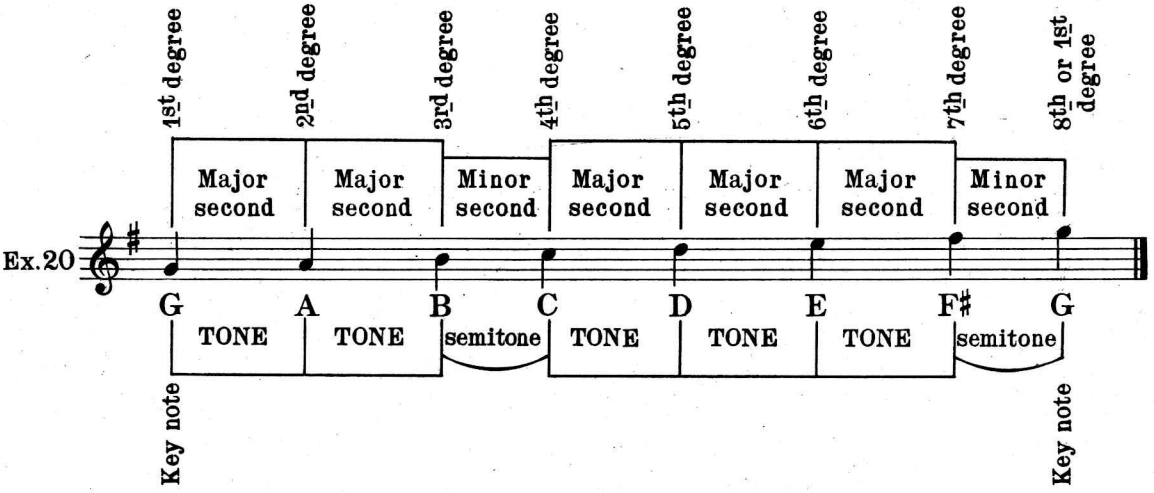
The major second interval consists of two half-steps or one tone.

The minor second interval consists of one half-step or semitone.

When eight notes are arranged in consecutive order they form a scale, the musical quality of the notes being governed by a series of whole tones and semitones. A scale thus formed is called a diatonic scale, the various tones and semitones being adjusted like the following scale of C Major:-



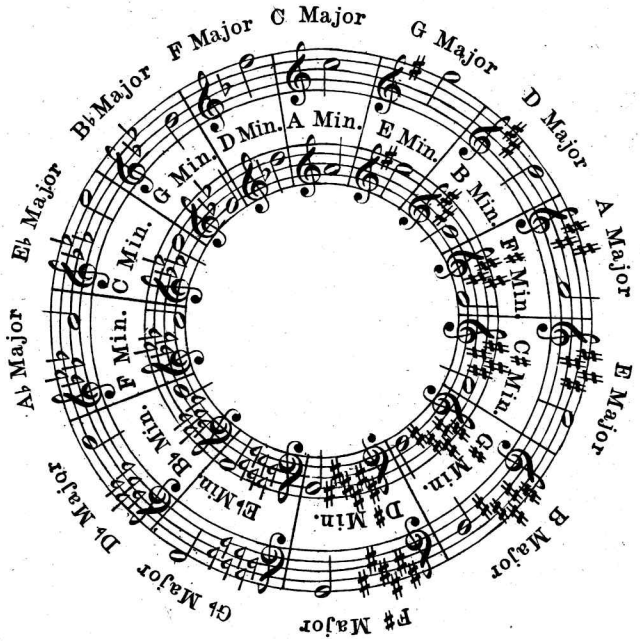
Scales may be formed in a similar on any letter, but the tones and semitones must conform to the model shown above. The scale of G Major, for example, requires F-sharp, in order that the semitone comes between the seventh and eighth degree.



A TRIP AROUND THE KEYS

A few minutes study of this double ring of signatures will repay the student, for it contains all keys employed in music. Sharp keys ascend by fifths and flat keys ascend by fourths. Beginning with C the typical key without sharps or flats — we find, by ascending a perfect fourth, F, the key with one flat. From F we ascend another perfect fourth, reaching B-flat, the key with two flats, and so on going upwards we add the additional flat for every new interval classed as a perfect fourth.

Starting again with C a similar orderly succession follows with the sharp keys. From C we ascend a perfect fifth to G, the key having one sharp. Going upwards a fifth from G we find D, the key with two sharps; and a fifth above D reaches A, the key with three sharps, and so on until we reach the key of F sharp which contains six sharps.



THE HARMONIC CIRCLE

Closely related keys will be found adjoining one another. To the right of C major we find G major, to the left is F major. Underneath C major we find its relative minor A, and under F and G we see their respective minors D and E. This little group of six keys forms a happy family where harmony and congeniality prevails; C, G and F being the major keys and A, E and D the minors.

In addition to that the harmonic circle presents the roots of all consonant triads in every key, revealing in a surprisingly lucid manner, how compact is the bond which unites the primary and secondary chords. Take the key of F major, for example, as a tonic chord. On the left we find B-flat, its sub-dominant, and on the right we find C, its dominant; these three notes F, B-flat and C, being the roots of the primary chords in F. Directly underneath them are the roots of the secondary chords in F.

Note—The keys of 7-flats and 7-sharps are not shown in the above being enharmonically the same as 5-sharps and 5-flats. The double-action Harp takes 7-flats (C♭) and 7-sharps (C♯) in their true positions, and not enharmonically.

Transposition

From the very beginning of these studies, all exercises should be transposed to another key, and rewritten with the same care as first employed. The new key may be higher or lower, whichever brings it into a practical signature.

As transposition means altering the key, a thorough knowledge of the various keys and their signatures is exceedingly important. In addition to that, the ability to picture a note on the staff higher or lower must be cultivated, along with a clear appreciation of major and minor intervals.

Strange though it may seem, the easiest change (for the same key) is an octave higher or lower, and the hardest transposition is a major seventh higher. These two extremes, however, are unnecessary for gaining facility in a change of keys. Good results may be obtained within a comparatively small compass, from a minor second to a perfect fourth higher or the same dimensions lower.

The first thing required for a key change is to write the clef and the proper signature for the new key. The next point is to find how much higher or lower this new key is from the old one. If the first key was F (one flat) and the new key G (one sharp) it shows that the new key is a whole tone (a major second) higher than the first key. This means that every note from the old key must be written a major second higher for the new signature. F becomes G, G become A, A becomes B and B-flat becomes C. If any B-flat in the first key has a natural before it, this means that C, for the new key, must be raised by a sharp; and if E-flat were introduced as an accidental for the first key, F natural is required for the new key.

While the above description makes transposition appear complicated, the actual work is very simple if the distance from the old key to the new one is remembered when writing the notes.

A convenient plan for starting the practice of transposition, is to select keys a third higher or a third lower. By so doing the old and new keys will be either on adjoining lines or adjoining spaces, and consequently more readily noticed when transposing each note.

When first attempting transposition it may seem harder to raise the key than to lower it. With a little practice either change can be quickly mastered.

A handy reference table for transposing is given here, showing the intervals to be calculated in changing the important keys.

From C to E-flat ---------- A minor third higher.
From C to E ---------- A major third higher.
From D to F ---------- A minor third higher.
From D to G ---------- A perfect fourth higher.
From E-flat to G ---------- A major third higher.
From E to G ---------- A minor third higher.
From F to B-flat ---------- A perfect fourth higher.
From F to C ---------- A perfect fifth higher.
From G to A ---------- A major second higher.
From G to B-flat ---------- A minor third higher.
From G to C ---------- A perfert fourth higher.
From A to C ---------- A minor third higher.
From A to D ---------- A perfect fourth higher.
From B-flat to C ---------- A major second higher.
From B-flat to D ---------- A major third higher.
From B-flat to E-flat ---------- A perfect fourth higher.

CHAPTER II

Triads Chord Building Part Writing Exercises Melodic And Harmonic Progression Harmonic Sequence

A triad is a chord formed of three notes.

Everything depends on the proper treatment of the triad, and for that reason, it will be used exclusively in this book, up to the dominant seventh and other dissonances.
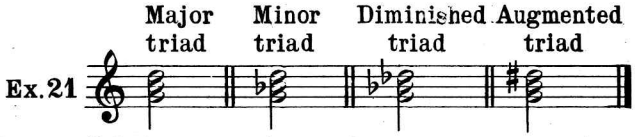
The different aspects of triads are easily remembered from the fact that, like intervals, they are either major, minor, augmented or diminished.

A triad may be constructed from any note of the scale, the note which is selected to form the triad being called the root. It will thus be understood that a triad is named after the root note. If this root note is C, the triad is called "C triad" or "C chord." If the root is D, the triad is the "D triad" or "D chord."

When the root has been selected, a triad is formed by adding notes a third and a fifth above this root. These upper notes determine the character of the triad according to the distance or intervals they occupy from the root, making the triad either major, minor, augmented or diminished.

The various triads built from a root note are as follows:-

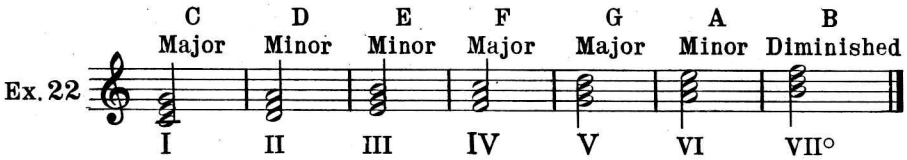
A major third and a perfect fifth form a major triad.
A minor third and a perfect fifth form a minor triad.
A minor third and a diminished fifth form a diminished triad.
A major third and augmented fifth form an augmented triad.



Of the seven triads possible in any major scale, three of them are major, three are minor and one is diminished.

In designating such chords Roman numerals are generally employed for the various degrees of the scale on which the chord is formed. Large numerals, thus: I. IV. V. signify major chords, while small numerals, thus: II. III. VI. indicate minor chords. When the zero mark (o) is by the side of a small numeral it signifies a diminished chord.
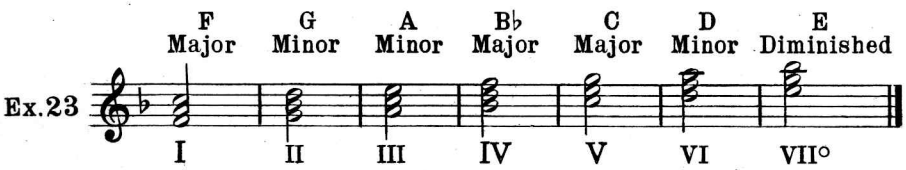
The various triads found in the scale of C major would be represented as follows:-



The above order of triads built from the notes in C Major, applies to all other major keys. It may be summed up as follows:-

A triad built from the 1st degree of the scale is Major.
" " " " " 2nd " " " " " Minor.
" " " " " 3rd " " " " " Minor.
" " " " " 4th " " " " " Major.
" " " " " 5th " " " " " Major.
" " " " " 6th " " " " " Minor.
" " " " " 7th " " " " " Diminished.

The various triads shown in C major should now be transposed to F Major, and marked like Example 23, then transpose to the key of D Major.



For designating the relative importance of chords, special names are attached to each note of the scale, as follows:-

1st degree of scale (Key note)..... TONIC.
2nd degree of scale..... Super-tonic.
3rd degree of scale..... Mediant.
4th degree of scale..... SUB-DOMINANT.
5th degree of scale..... DOMINANT.
6th degree of scale..... Sub-mediant.
7th degree of scale..... LEADING-TONE.

The names super-tonic. mediant and sub-mediant are seldom used, these degrees of the scale being spoken of as the second, third and sixth.

Of these seven triads the most important ones are the three major chords coming on the TONIC (I), DOMINANT (V) and SUB-DOMINANT (IV). These are called the primary chords.
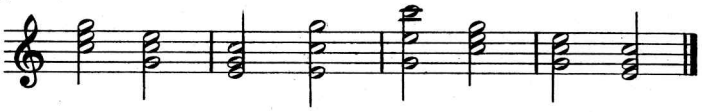
The three minor triads on the second, third and sixth degrees are called the secondary chords

In the exercises which follow all the triads are available except the leading-tone on the seventh degree, which, for the present, must not be used to build a chord.

Chord Building

Any note of a chord may be on top without altering the name of the chord. The following are all C major chords:-
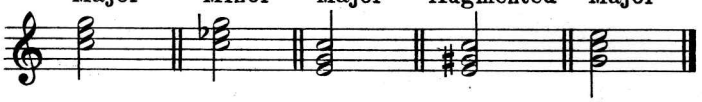
Ex.24
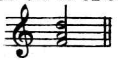


When a note in a chord is sharped or flatted, the character of the chord is altered.

Major Minor Major Augmented Major
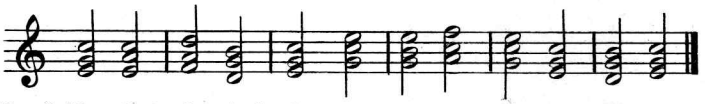
Ex.25



Quick recognition of chords is a tremendous asset which can be acquired only by writing them down. In the following  F is not the root, because from F to D is a sixth. By mentally rearranging the notes so that they follow one another in a series of thirds, it will be found that they run D, F, A, which reveals D as the root, making the chord D minor.
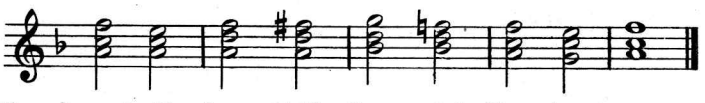
Write down the following chords, and over each one place the proper name.

Ex.26



Name the roots of the following chords before writing the exercise in the key of F. Then transpose the entire example into the key of G.
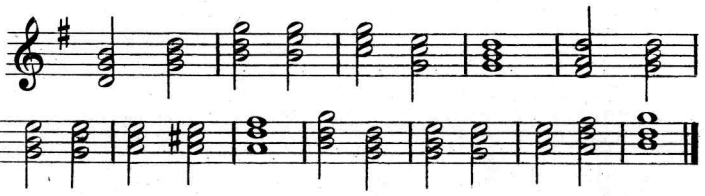
Ex.27



The third chord in the above is D minor, while the next is D major.

Read off the chords in Example 28, and then write them out as shown.

Ex.28



Part Writing
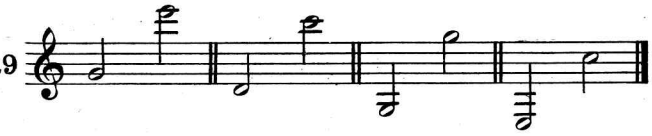
This section will be found more attractive than the preceding ones, for it contains material quite interesting and pleasing.

Part writing consists of employing four voices for each chord, these voices being called soprano, alto, tenor and bass. As this book was designed for treble clef readers, all the important examples and exercises in part writing, have been placed in the treble clef, the full range of the combined four voices being three octaves.

In order that the four voices may retain an effect of compactness, they should rarely extend beyond the following compass:-

SOPRANO ALTO TENOR BASS

Ex.29
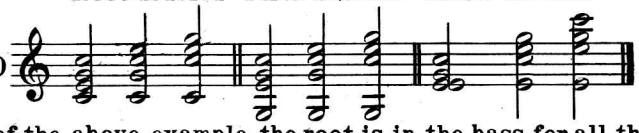


The triad furnishes the nucleus for part writing, and as this chord contains only three notes, one of the notes must be doubled or used twice in the same chord. This doubled note can be an octave higher or an octave lower. Occasionally it must be a unison, and when that occurs the two voices have the same note, displayed as a double note on the same degree of the staff.

Any one of the three notes in a triad may be doubled in order to secure a four-voice chord. The best note for that purpose is the root, the next in value being the fifth of the chord, while the weakest note to double is the third.

Root doubled Fifth doubled Third doubled

Ex.30
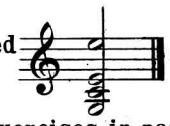


In the first measure of the above example, the root is in the bass for all three chords. In the first chord this root note is doubled in the soprano. In the second chord the root is doubled in the alto, in the third chord it is doubled in the tenor.

The measure containing a fifth for a bass note shows this note doubled first in the alto, then in the tenor and last in the soprano.

In the measure where the third is in the bass, a unison is shown between tenor and bass, then the third is doubled in the alto and last in the tenor again. If this third were doubled in the soprano the chord becomes weak.

A note that is doubled need not be in the bass, and for that reason the third of a chord may be duplicated between other voices with good effect. If this third is in the soprano, it becomes very agreeable when doubled in the alto or tenor.

Third doubled in the alto.

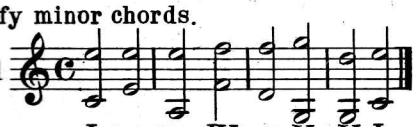


Third doubled in the tenor.
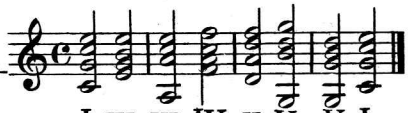


A few introductory exercises in part writing are given here, showing only the bass and soprano voices. The tenor and alto voices must be selected to complete each chord, and the whole example written on blank music paper. The bass note, in every instance, is the root of the chord needed. Large Roman numerals under the bass indicate major chords, small Roman numerals signify minor chords.

Ex.31



I III VI IV II V V I

This example could be worked out as follows:-



I III VI IV II V V I

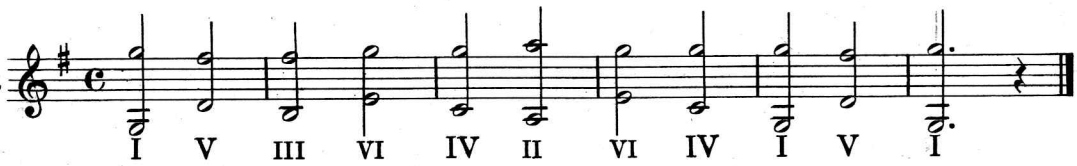
On the next page similar exercises are given. In writing down the missing parts, if the notes are kept close together, the student will observe certain notes repeated from chord to chord. Keep the parts together and these repeated notes will be retained in the same voice, an important point to remember when the time comes to harmonize single bass notes. When a full chord is repeated, the alto and tenor may move up or down with the soprano note.

Particular attention must be given to the degree on which a chord is formed. In example 31 the second chord is e minor, the root being doubled in the soprano.

The following exercises contain notes for soprano and bass, to which must be added alto and tenor voices for completing each chord. Write all the examples on blank music paper.

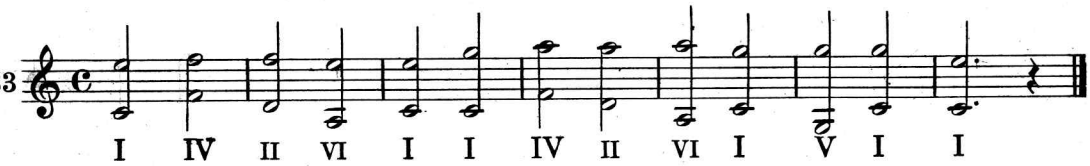
The root of each chord is in the bass. If this root note is not duplicated in the soprano, it may be doubled in the alto or tenor, according to the rule given on the previous page. Place the proper Roman numerals under each bass note, they show the degree on which the chord is formed. Large numerals indicate major chords, small numerals minor chords.

Ex.32
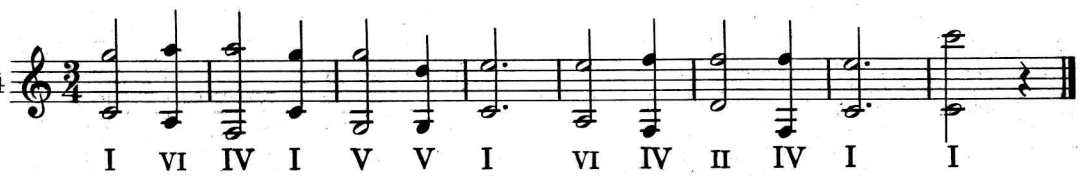


Observe that the above is in the key of G. For the first chord place D in the alto and B in the tenor; then keep D in the alto for the second chord.

Ex.33
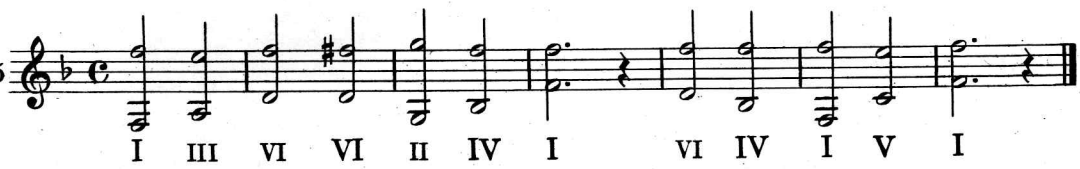


In the above example, C is in the alto for first and second chords.

Ex.34



For Example 34 place alto and tenor directly below the soprano note, and it will be found that C is retained in the tenor for the first four chords.
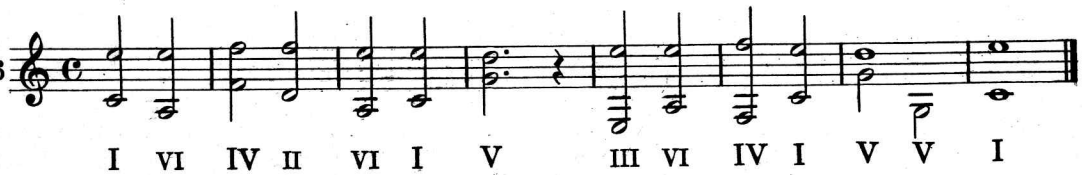
Ex.35



The above is in the key of F, Observe the sharped F in the second measure.

In the fourth measure of the following example, the bass and tenor have G in unison.
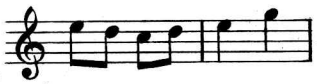
Ex.36



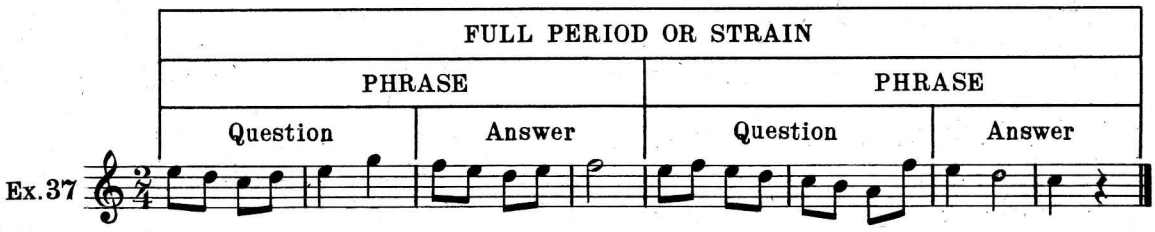
Melodic Progression

When a voice moves from one tone to another, the change is termed melodic progression. These skips or melodic steps, when heard in the soprano, form a melody or tune which becomes acceptable if the melodic skips are agreeable and easy of intonation.

A melody thus formed consists of a series of questions, answers, phrases and periods. A question and its answer being a phrase while a double phrase constitutes a period, or as musicians often call it "a strain."

These melodic skips form a question:-  These form an answer:- 

A full period or "strain" would be made up as follows:-
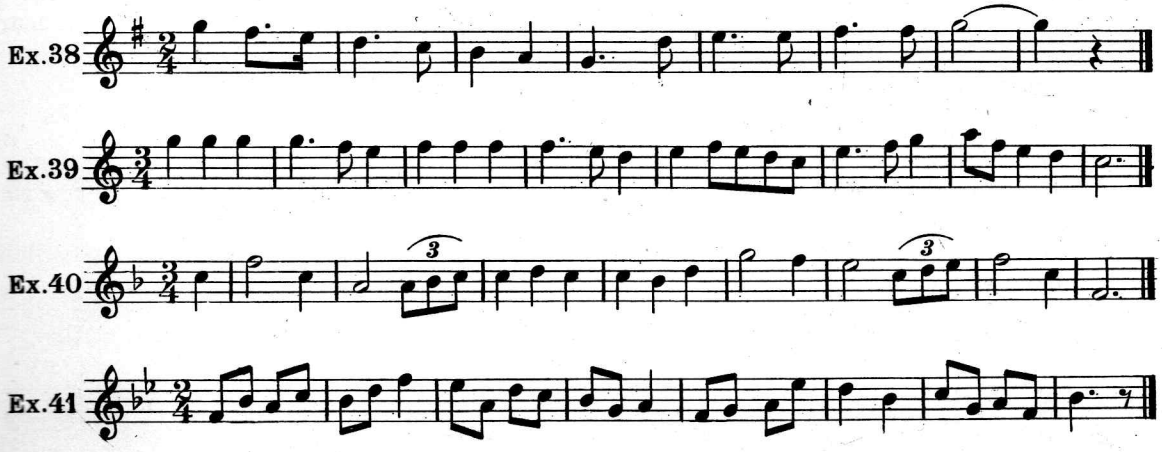


Many persons believe melody is "born, not made," and that he who composes an original tune possesses a rare gift. This may be true, yet the art can be acquired and highly cultivated if certain rules are observed in melodic progression. The skip of an octave is pleasing even though it is a long interval, but the interval of a ninth would be rather venturesome by even a skillful player.

In melodic progression the intervals permitted include all the major and minor intervals up to the minor sixth. (From A to F in the 6th measure of Example 37, is a miner sixth.) Other intervals permitted are the chromatic interval, the octave and the diminished fifth from the leading-tone to the fourth degree, which may also skip downward from the fourth degree to the leading-tone.

All other intervals are forbidden, especially those which are diminished or augmented.

Most of the intervals in vocal and instrumental music are small. Wherever an exception occurs it will be found the skips were intended to obtain certain effects. The last note in the verse of "OLD FOLKS AT HOME" is the key note or tonic. From that tonic the melody skips upward to the leading-tone which begins the chorus, yet the slight pause between verse and chorus, combined with the plaintive words of the song, make this interval of a major seventh extremely appropriate.

Name the intervals in the following examples, carefully observing the different keys:-



Harmonic Progression
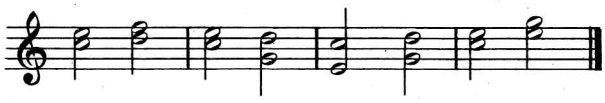
When chords change, the succession from one chord to another is termed harmonic progression. There exists an affinity between chords depending entirely on how the chords succeed one another, the beauty of each chord resting on what precedes and what follows.

The rules for harmonic progression have been established through the countless models and examples left by all the masters, who avoided changes which were repugnant. A few of these rules will now be given.

In connecting chords of two or more notes, there is available a choice of three different movements, called parallel motion, contrary motion and oblique motion. An illustration of each is shown here.
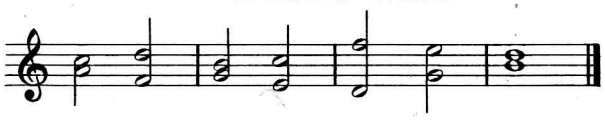
PARALLEL MOTION

Parallel motion is when the voices rise and fall simultaneously.
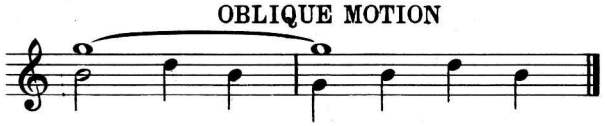


CONTRARY MOTION

Contrary motion is when one voice rises while another falls.



OBLIQUE MOTION

Oblique motion is when one voice remains stationary while another rises or falls.
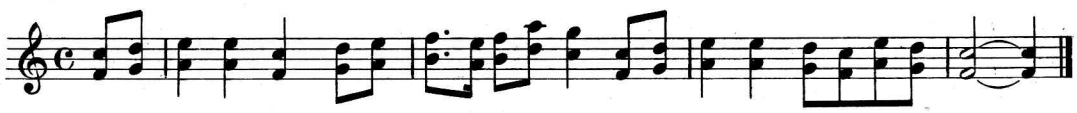


Of these three movements, contrary motion is the most effective because it gives an individuality to each voice, and makes possible the avoidance of faulty progression. Sometimes, however, it cannot be used and parallel or oblique motion becomes necessary.

Parallel motion is frequently called similar motion. Its employment among soprano, alto and tenor voices is proper when harmonizing the fundamental basses which will soon be taken up. The great danger in parallel motion of voices, comes from the fact that it seems to invite those two stumbling blocks which all harmony students dread:- consecutive fifths and consecutive octaves.

Consecutive Fifths And Octaves

When two voices, a fifth apart, move to a different chord where they appear a fifth apart again, an unpleasant effect is produced called consecutive fifths. If the fault is continued, from chord to chord, it creates the impression of a melody being played in two different keys at the same time, as will be observed if the student tries the following:-
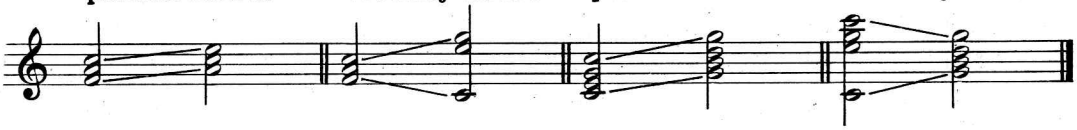
Ex.42
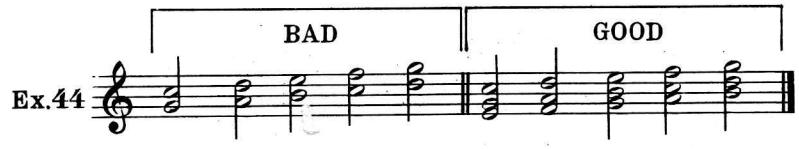


Consecutive fifths or octaves, between the same voices, must not be used in either parallel or contrary motion.

Fifths by parallel motion | Fifths by contrary motion | Octaves by parallel motion | Octaves by contrary motion

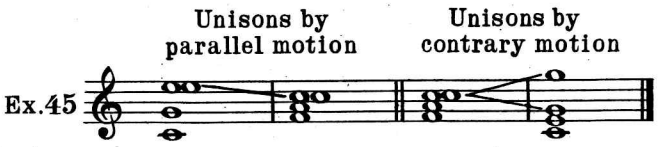
Ex.43



Consecutive fourths, when heard alone, are very objectionable, but when another interval is added they become very musical.

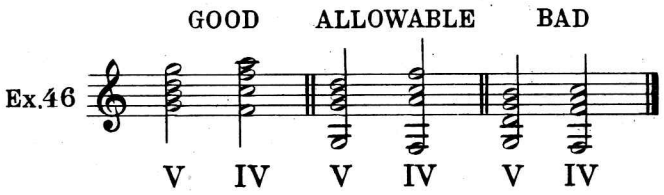


When two voices take the same tone it is called a unison. Consecutive unisons between the same voices are forbidden, in both parallel and contrary motion.



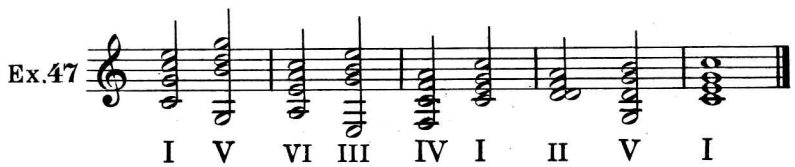
In harmonic progression the chords follow one another in a natural manner, if the different voices are kept close together, and care is taken to recognize the degree of the scale on which each chord is formed. This quick recognition of the root note is vital; the only way it can be acquired is to place the proper Roman numeral under each bass note, as shown on page 17.

When a chord formed on V moves to a chord formed on IV, the position of the leading-tone, in the first chord, is exceedingly important. If this leading-tone is placed in the alto or tenor the progression is good, if in the soprano it is bad.



Harmonic Sequence

A sequence means an orderly repetition of a musical model or form. A melodic sequence refers to the melody itself; harmonic sequence to the harmony which adorns that melody. In harmonizing a sequence greater freedom is allowed in the movement of the different voices, so that repeated notes may skip to another voice.



The above definitions and examples should be carefully read, although a thorough understanding of them is not expected, nor is it necessary, just at present, to memorize each one. Their entrance into the various exercises will be indicated, so that proper treatment becomes clear.

CHAPTER III

Harmonizing the bass, major mode The five rules
Exceptions Primary chords Secondary chords Exercises.

The relation of chords is perceived more rapidly by first harmonizing bass notes, before attempting to harmonize a melody. The basses employed for that purpose are the roots of the chords needed to fill out the three upper voices: soprano, alto and tenor. These voices should be written as near each other as possible, observing the following rules:-

1 When no figure stands over the first bass note of an exercise, the soprano voice must have the octave of that bass note. A figure 3 over the first bass note requires its third in the soprano, while a figure 5 means a fifth in the soprano. This rule applies to the first chord only, in each exercise.

2 When a chord contains notes that were in the preceding chord, these repeated notes should be retained in the same voice.

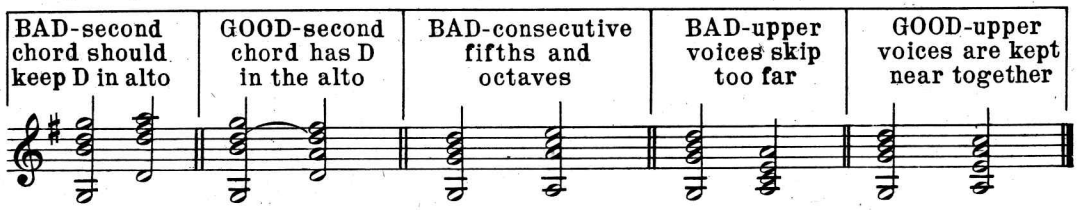
3 If there are no notes alike in consecutive chords, move the soprano, alto and tenor voices in contrary motion to the bass.

4 Avoid consecutive octaves and consecutive fifths between the same voices.

5 Mark the proper Roman numeral under each bass note.

Some danger spots are here shown:-
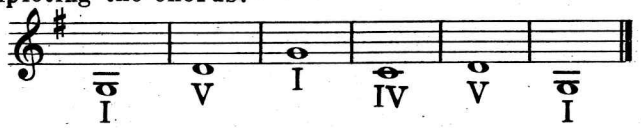
Ex. 48
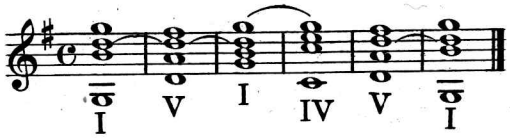


Retained notes may be tied, as shown with D in the above.

The following bass notes are the roots of major chords. Over each write the soprano, alto and tenor voices, for completing the chords:-

Ex. 49
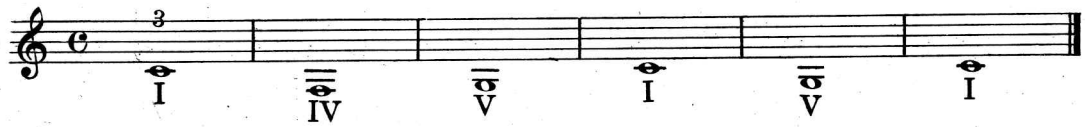


The first chord in the above must be G, with the root doubled in the soprano. The D in this first chord is repeated in the second chord, so it must be retained in the same alto voice. This same D being again repeated in the third chord, it must be kept in the alto.
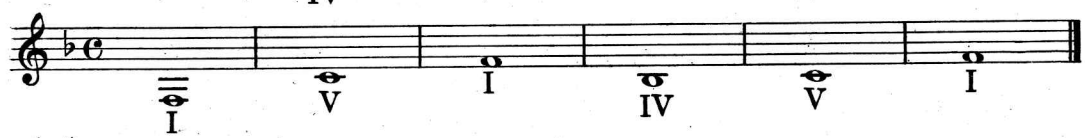


Harmonize the following basses as described above. The first bass note has a figure 3 over it, which means that the soprano begins with the third of the bass.
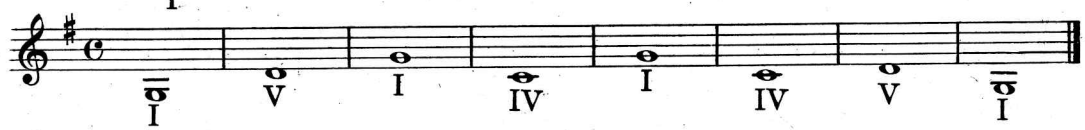
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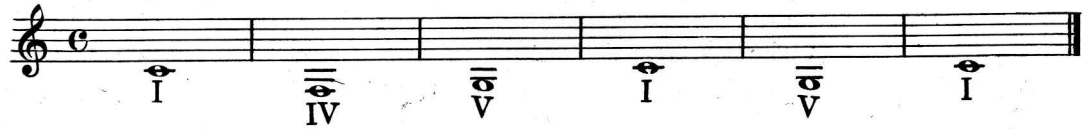


Ex. 51
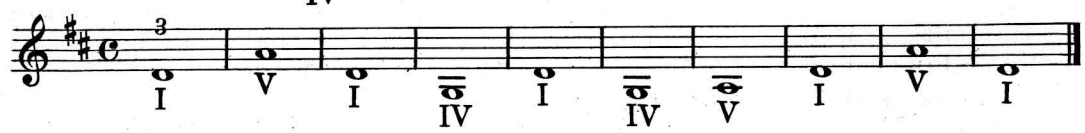


Ex. 52



Ex. 53



Ex. 54
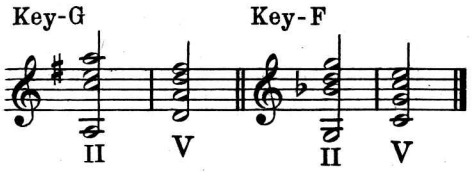


The preceding exercises were confined to the three primary chords in each key, these chords being the TONIC (I) SUB-DOMINANT (IV) and DOMINANT (V.)

A feeling of monotony comes from constantly repeating such chords over and over again. An occasional minor chord introduced between them brings immediate relief, and for that reason the following examples call for many chords formed on the second, third and sixth degrees. These minor chords should be marked in small Roman numerals thus:- II, III, VI.
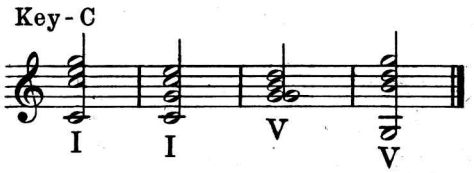
Bearing this in mind, there are new six chords available for harmonizing bass notes, three major chords marked I, IV and V and three minor chords marked II, III, VI.

It was stated in RULE 2, that when a chord contained notes that were in a preceding chord, these repeated notes should be retained in the same voice. This rule may now be disregarded under the following conditions:-
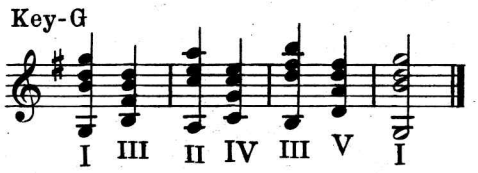
When the bass move from second degree of the scale to the DOMINANT V, the repeated notes may skip:-



When the second chord is a repetition of the first chord, the voices may skip:-



In harmonic sequence (as explained in Example 47.) the voices may also skip:-



On the next page is a continuation of the exercises for harmonizing bass notes. All these examples are in major keys, although a liberal mixture of minor chords is introduced without altering the major mode.

Each bass note is the root of the chord needed for the three upper voices, soprano, alto and tenor. Double this root in preference to any other interval. (See exception below.)

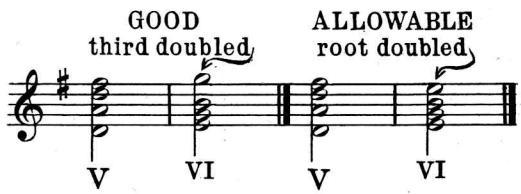
Centrary motion between the bass and the three upper voices, is more effective than either parallel or oblique motion.

Each exercise must end on the TONIC chord, and although not essential, an effort should be made to have the soprano double the root note in the final chord. This will be easy if the preceding chord has the leading-tone in the soprano. (The leading-tone is the seventh degree of the scale.)

Special attention is called to the change from a chord on second degree (II.) to the DOMINANT (V.) When this occurs it is often best to move the three upper voices in contrary motion to the bass.

The third of a chord formed on the sixth degree, may be doubled when preceded by the DOMINANT. This is frequently the best plan if the first chord has the leading-tone in the soprano.
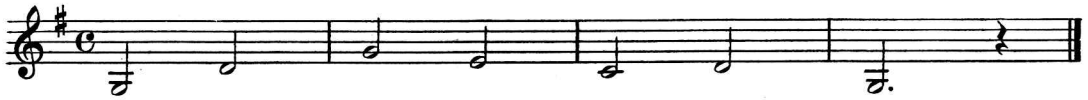
Ex. 55



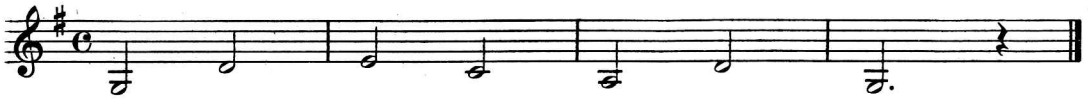
In harmonizing the basses which follow, no musical instrument should be touched. The temptation to play each number becomes almost irresistible, but this only delays a proper understanding of chord relation.

Write each exercise on blank music paper, with the proper Roman numerals under each note. Before harmonizing these basses read again the rules. Notes which are held over from chord to chord may be tied.
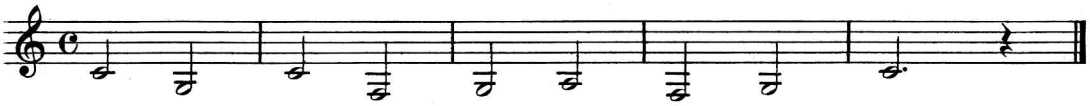
Ex. 56
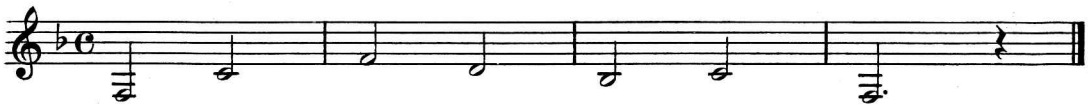


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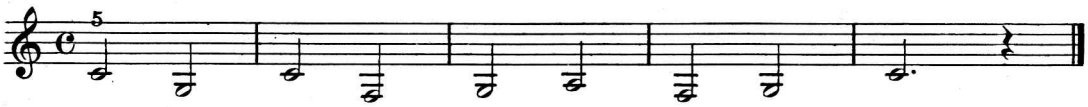


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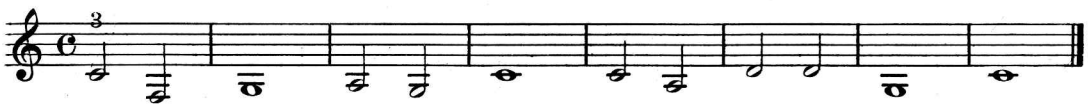


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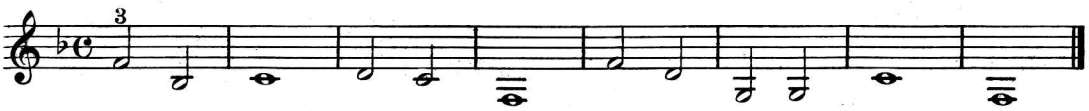


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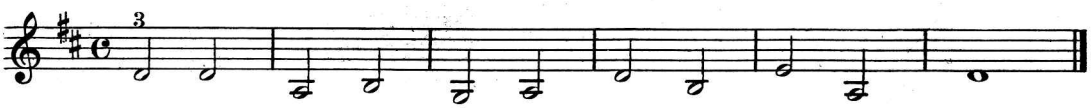


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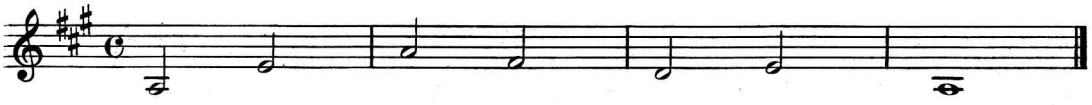


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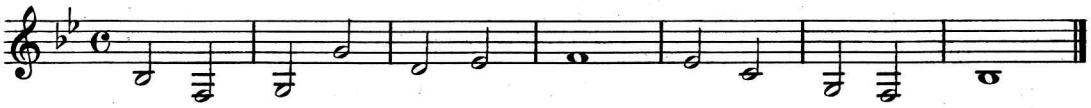


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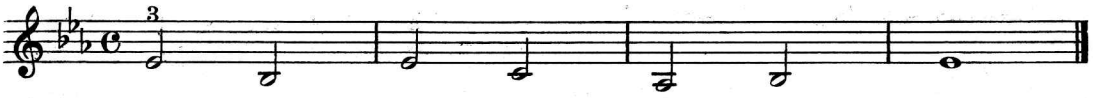


Ex. 64



Ex. 65
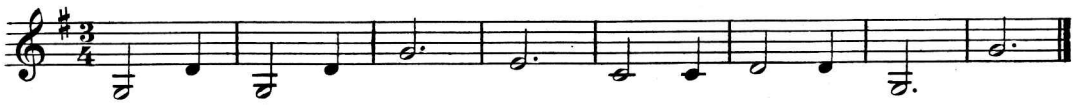


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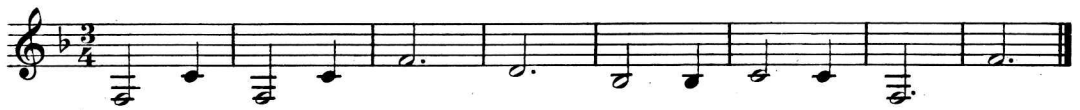


When a bass note is repeated it means a repetition of the same chord. When this occurs, consecutive fifths and octaves are permitted between the same voices.
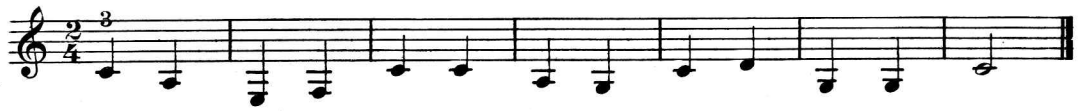
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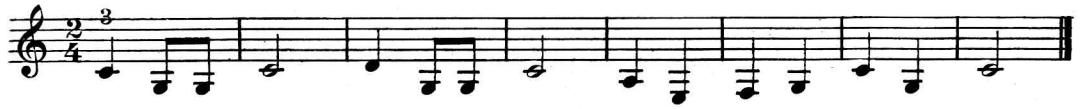


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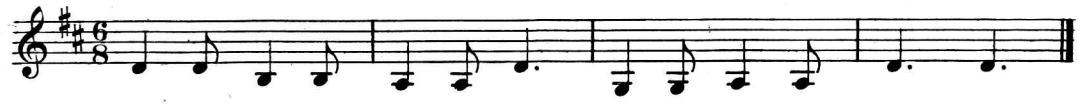


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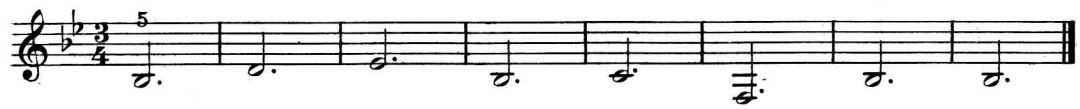


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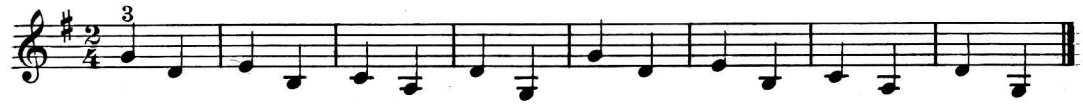


Ex. 71



Ex. 72
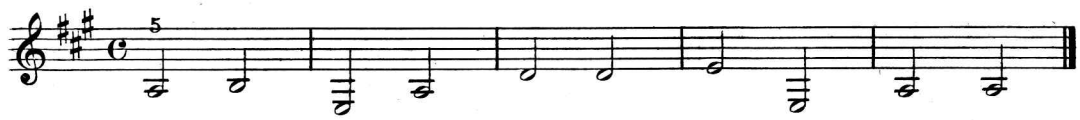


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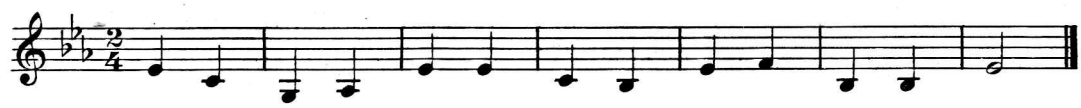


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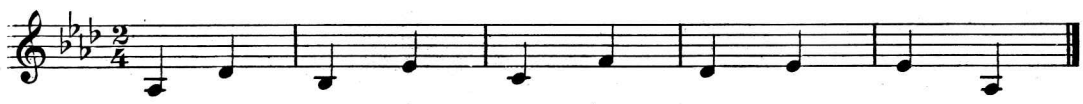


Ex. 75



Ex. 76



Ex. 77



CHAPTER IV
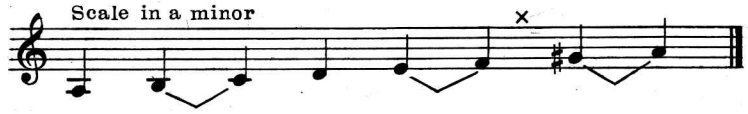
Harmonizing the bass, minor mode — The augmented second
Doubling the third on sixth degree — Exercises.

Every major scale has a relative minor. A major scale and its relative minor are spoken of as related, because they both have the same signature, they look alike and sound nearly the same. The form used in elementary harmony is the harmonic minor scale.

The relative minor of any major scale is found by taking the third note of the descending major scale for a key note, or tonic. Starting with that for a basis, the seventh note is chromatically raised to obtain a leading-tone, and gain a dominant chord in minor, the same as major.

Major keys are usually represented by capital letters, minor keys by small letters. The relative minor of C would be a, which is here shown:–

Ex. 78
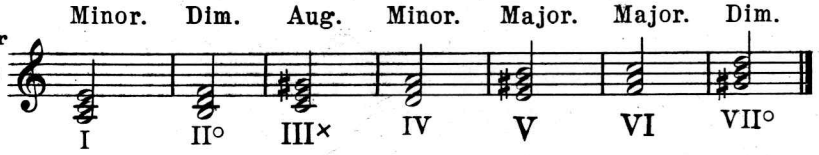


On examining the above it will be noticed that three half-steps occur in the minor scale.

In addition there occurs the interval of an augmented second between the sixth and seventh degrees. (See × in example 78.) This interval must not be used in elementary harmony. As explained on page 19, the only augmented interval permitted in these exercises is the augmented prime.

The different triads formed in the minor mode are given below, marked underneath with Roman numerals:–

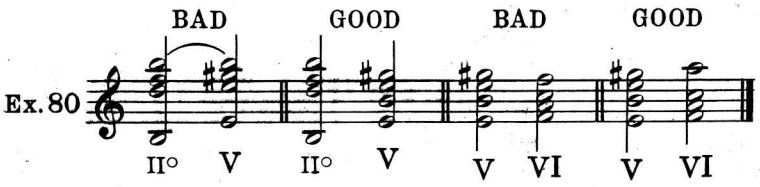
Triads in a minor

Ex. 79



When an interval is prohibited, (like the augmented second,) it means that the progression must not occur in the same voice. If any one of the four voices has F, it cannot take G♯ for the next note. In the same way if a voice has G♯, it cannot follow with F.

Ex. 80
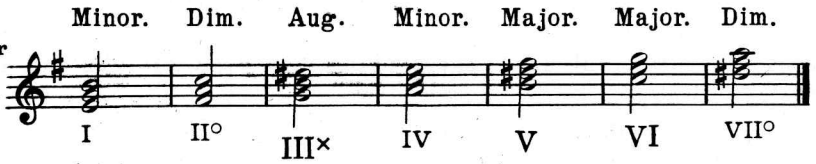


In the first measure of the above, F is in the alto followed by G♯ for alto in the very next chord. This is corrected in the second measure by placing G♯ in the soprano while the alto moves to E, and the tenor takes B. This progression is best even though B does not remain in the same voice.

In the third measure G♯ in soprano moves down to F. A correction is shown in fourth measure, where it moves up to A, thus doubling the third of the F chord. (VI)

The augmented second will be quickly recognized by writing the different triads in the most used minor keys. The relative minor of G is e, that of F would be d, and B♭ has g. Write the following triads in e, marking each chord with Roman numerals as shown, then write the triads for d and g.

Triads in e minor

Ex. 81



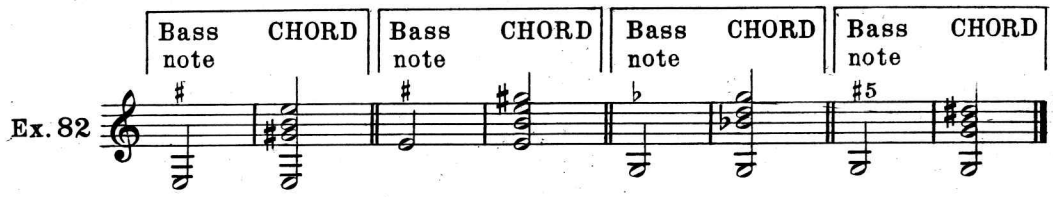
The reason for placing Roman numerals under each bass note, is to impress the mind with the degree of the scale on which the chord is formed.

In harmonizing basses in the major mode, it was stated that the rule for keeping repeated notes in the same voice, could be broken when the bass moved from the second degree (II) to the dominant (V) In the minor mode it is compulsory to break the rule, in order to avoid the augmented second, as shown in example 80. Therefore, when a bass note moves from the second degree (II°) to the fifth (V) move the three upper voices in contrary motion to the bass.
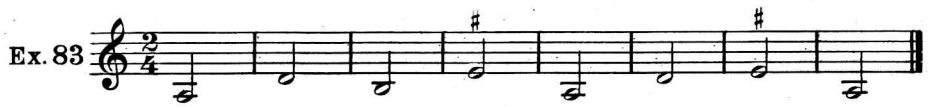
Also, in the minor mode, the third of a chord formed on the sixth degree (VI) should always be doubled in order to escape the augmented second. Sometimes this third must be doubled by a unison between two voices, but wherever possible it should be treated as shown in example 80.

With the two exceptions given above. all the rules for harmonizing basses in the major mode are to be observed in the minor mode. For the present the augmented triad on the third degree, and the diminished chord on the leading-tone (seventh degree) will not be used. The five chords which may be used in the minor mode are as follows:- first degree (I) second degree (II°) fourth degree (IV) fifth degree V and sixth degree VI.
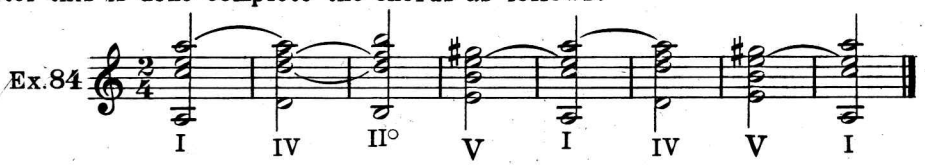
A series of basses in minor keys will now be given to harmonize. A sharp, flat or natural over a bass note, without a figure by its side, means that the third of the chord is to be chromatically changed. A figure by the side of this chromatic sign means that the corresponding interval is to be changed.



Harmonize the following basses in a minor, carefully observing the instructions just given.



Write the above bass notes on blank music paper, reserving a space for the sharp signs, so as to leave room for the chords needed. Then place the proper Roman numeral under each bass. After this is done complete the chords as follows:-



In the first two measures of the above, the bass and tenor move up to what is called a hidden octave. This is permissible only when an inside voice (such as tenor or alto,) would be compelled to take an angular or awkward movement. Hidden octaves and hidden fifths are entirely different from consecutive octaves and consecutive fifths, which are never permitted in elementary harmony. The mere repetition of the same chord, however, may include such progressions with perfect freedom.

The real meaning of hidden, is when two voices in parallel motion, pass over notes which, if written out, would form an octave. Between soprano and bass (termed the outside voices,) this is allowable if the upper voice moves diatonically.

On the next page a continuation of the exercises for harmonizing basses in the minor mode will be found. Each bass is the root of the chord needed for the three upper voices. Write these basses on separate blank music paper, placing the proper Roman numeral under each, before adding the full chord.
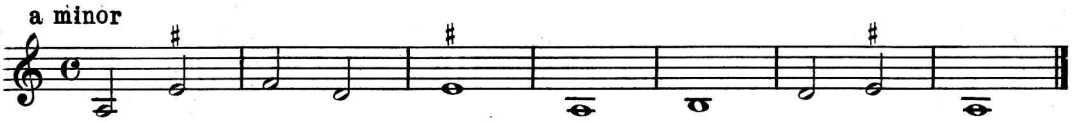
Notes held over from chord to chord should be tied.

The first chord in exercise 85, must have A in soprano, on 1st leger line above the staff. The second chord has G♯ for soprano. The third chord is on the sixth degree (VI) and must double the third thus:-  the alto moving down to C, while the tenor doubles the third (A) with soprano.

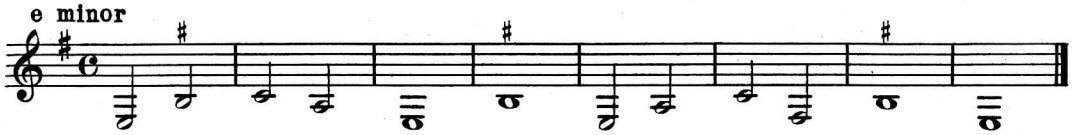
a minor

Ex. 85 
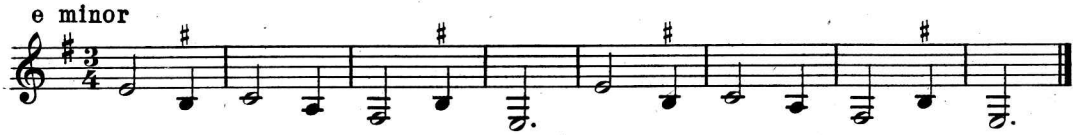
a minor

Ex. 86 

e minor

Ex. 87 
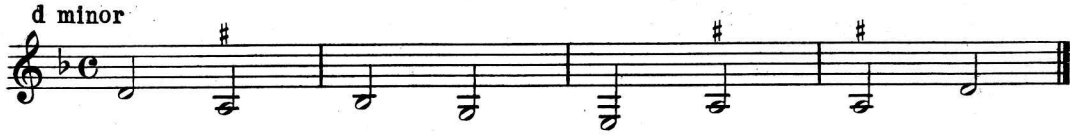
e minor

Ex. 88 
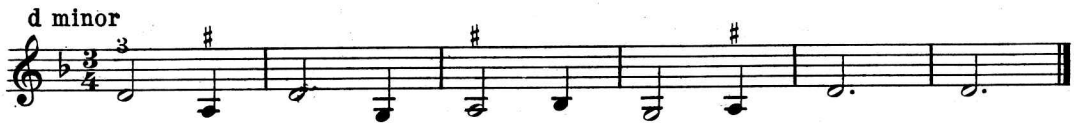
d minor

Ex. 89 
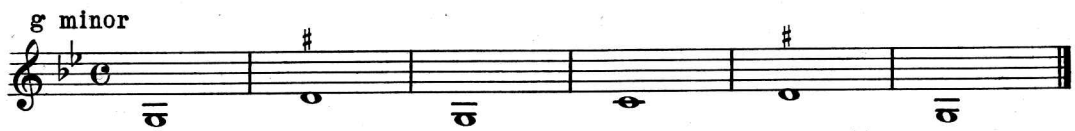
d minor

Ex. 90 
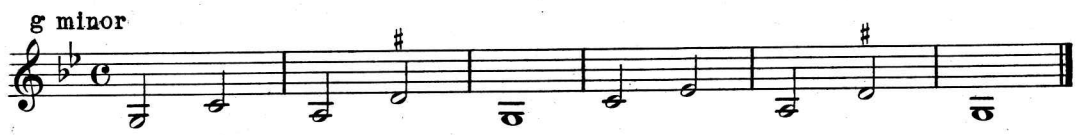
d minor

Ex. 91 
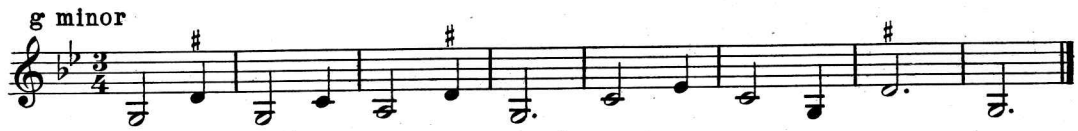
g minor

Ex. 92 

g minor

Ex. 93 

g minor
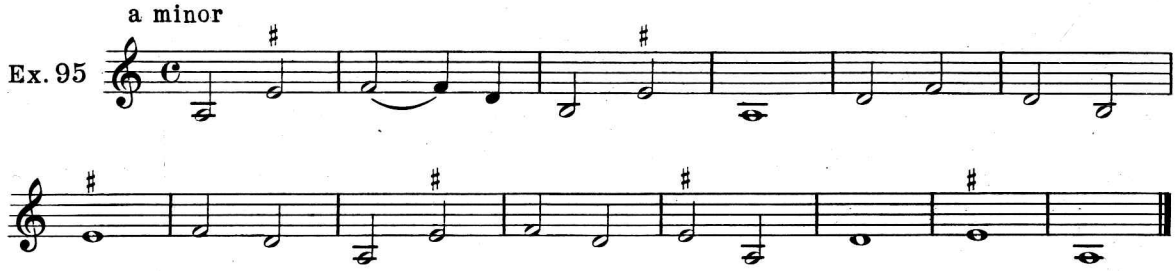
Ex. 94 

The following is a continuation of basses to be harmonized in the minor keys. Each bass is the root of the chord needed for the three upper voices.

Write each exercise on blank music paper, placing Roman numerals under the bass notes before adding the chords.
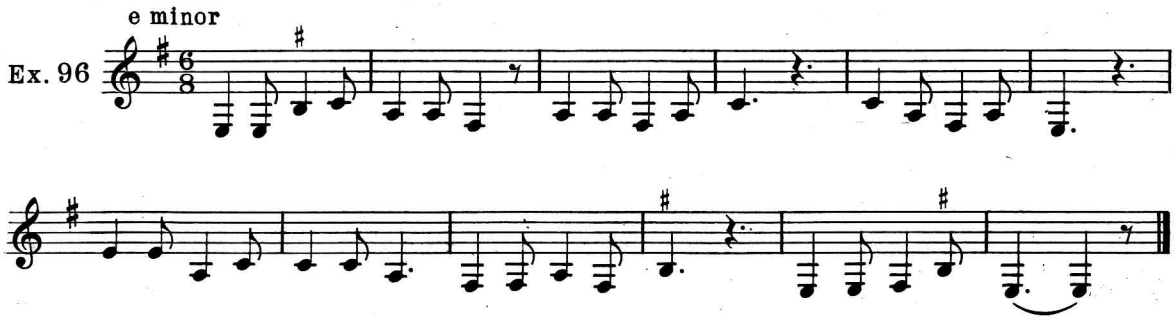
a minor

Ex. 95
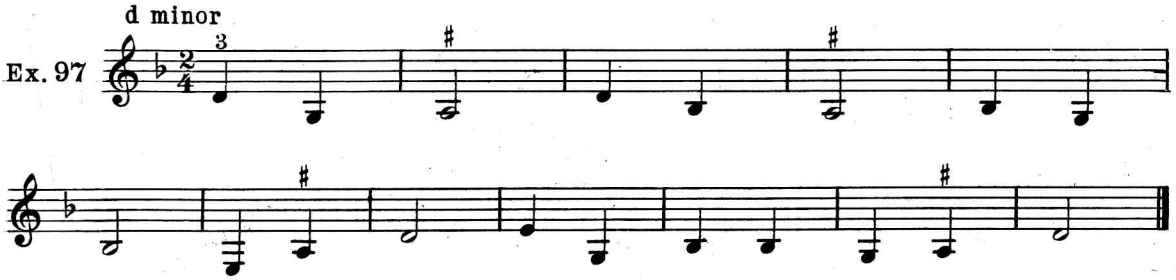


e minor

Ex. 96
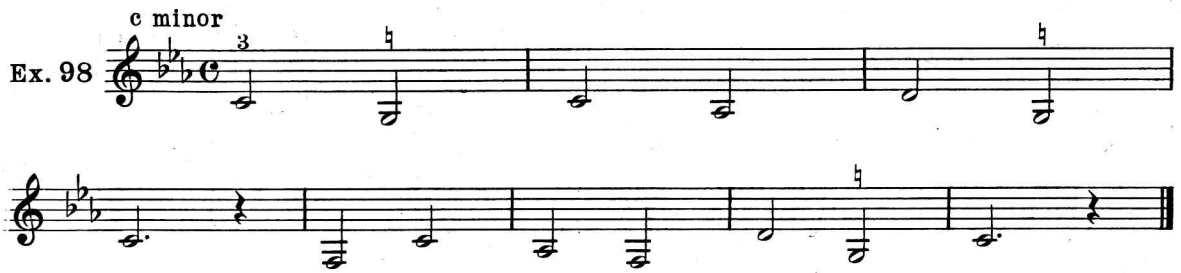


d minor

Ex. 97



c minor

Ex. 98



The student should now composo several basses in both the major and minor mode, to be harmonized. like the preceding exercises. This work is exceedingly important before taking up the next chapter.

In selecting the basses for this work remember that the leading-tone in major keys, must not be used to form a chord. In the relative minor this chord is on the second degree, and becomes a very useful and beautiful chord.

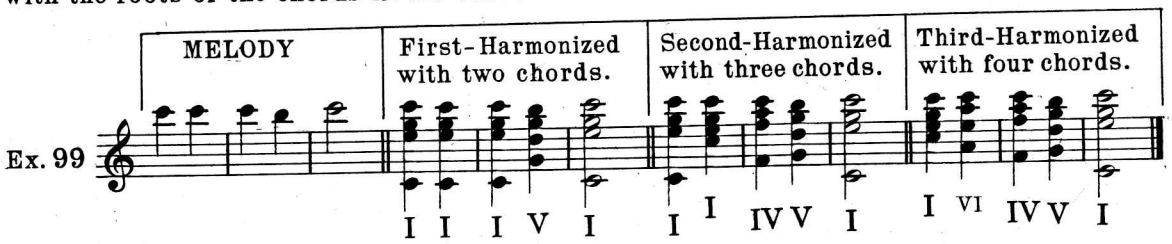
Also remember that the augmented triad, on the third degree of minor keys, must not be used; and the leading-tone, of both major and minor keys, must not be used to form a chord.

CHAPTER V

Harmonizing melodies in major keys Exercises.
Melodies in the minor Exercises.

When first attempted, the harmonizing of a melody seems to be a very difficult and complicated undertaking, but if the task is approached gradually, with simple melodic themes for soprano, it becomes comparatively easy.

Below is a short melody followed by three different ways in which it could be harmonized, with the roots of the chords in the bass:-



On examining the above it will be noticed that C, in the soprano, is first harmonized as the root of the chord. In the second method it is harmonized as the root and afterwards the fifth of the chord. In the third method this C is harmonized as the root (C chord,) then the third (a minor) and then then the fifth (F chord.)
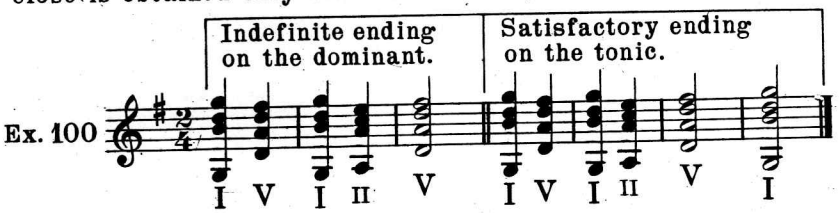
It is this change of harmony with every note which adds color and variety to chord successions, although a repetition of the same chord is not objectionable. On many occasions a chord must be repeated.

Thus far we have six chords available for harmonizing melodies in the major mode; three of these chords being major and three minor. In every succession of chords the major chords must predominate in order to establish the tonality of the key. These major or primary chords are the tonic, sub-dominant and dominant. Their incessant use, however, creates a feeling of monotony, and for that reason a generous sprinkling of the minor or secondary chords, in between the primary chords, brings immediate relief. These secondary chords are formed on the second, third and sixth degrees of the scale.
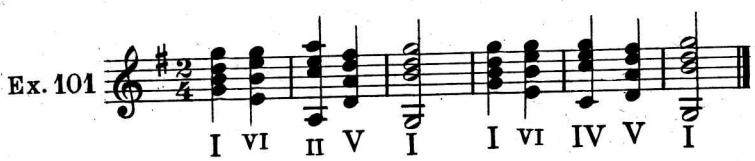
The primary chords are marked thus:- I, IV, V.

The secondary chords are marked thus:- II, III, VI.
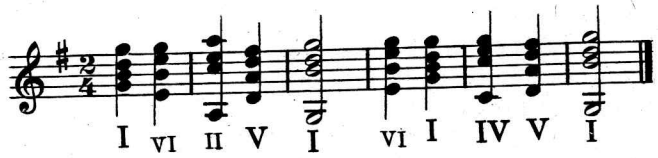
If any one of the primary or secondary chords is played, as an isolated chord, with nothing before or after, it will be accepted as final; but in a succession of different chords a satisfactory close is obtained only when the harmony ends on the tonic.



As the melodies to be harmonized must have the root of each chord in the bass, this note may skip an octave when a chord is repeated. See measures 3 and 4 in the following example:-



Another way to harmonize the above melody, showing how the repeated chord may be changed to a chord on the sixth degree:-
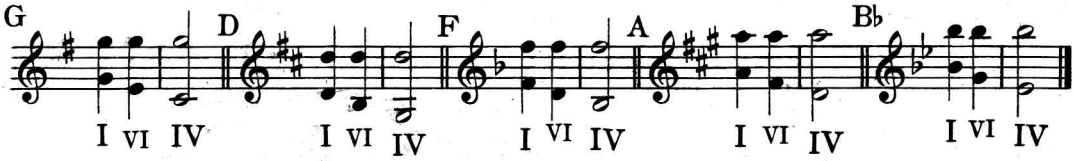


From the previous examples it will be seen that in harmonizing a melody, there are many occasions when the choice of several chords is possible. It is this element of choice which imparts interest in the work, and bestows an individual touch to the exercises.

In selecting the chords there are two main things which must be constantly borne in mind- first, the key and second, the degree of the scale on which the chord is formed. If these two chief points are neglected everything else becomes intricate and complex. When a chord has been selected the bass should be written at once, placing the proper Roman numeral underneath. This shows the degree of the scale on which the chord is formed. If the chord is major, the Roman numeral is large, if the chord is minor the numeral is small.

Key - G D F A B♭

Ex. 102



Every chord is affected by the preceding chord and the one which follows. A chord which produced a good effect in one place may become hideous in another, because its uncongenial neighbors destroyed and overwhelmed all semblance of beauty. If the exercises on harmonizing bass notes have been carefully worked out, there will be no trouble in selecting the necessary changes for harmonizing the simple melodies which follow.

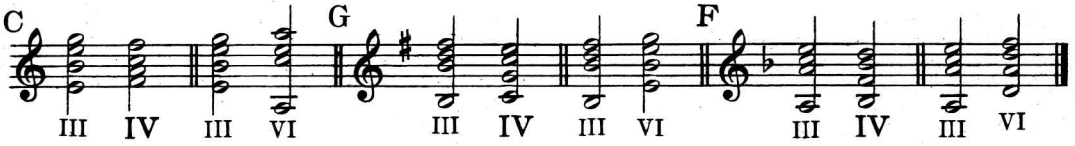
As previously mentioned the chords of the tonic I, sub-dominant IV, and dominant V, are the most important ones, and possess the strongest tonal force.

Next to these in value are the minor chords on the sixth degree VI, and second degree II, the latter chord should not be prolonged or used too often.

The chord on the third degree III, is the weakest of them all, and when employed should be followed by either IV or VI.

Key - C G F

Ex. 103



A series of melodies in major keys will be found on the next page. The notes are for the soprano voice, to which must be added the three other parts, alto, tenor and bass. All the former rules for harmonizing basses are to be carefully observed here.

The root of each chord must be in the bass.

Commence each exercise with the tonic chord and close with tonic. The succession of harmonies should consist largely of the primary chords. It will be found that chords on the second and sixth degrees may frequently be used, while that on the third degree introduced only occasionally.

A chord may be formed on any degree of the scale except the leading-tone - VII?

A change of harmony should occur with each soprano note.

Remembering the effect of adjoining chords as described above, there is almost perfect freedom in changing from one chord to another. A few places to be noticed with caution are given here.

The change from II to V is good.

The change from V to II is weak.

The change from IV to V is good.

The change from V to IV is poor, especially when soprano moves from leading-tone to tonic.

The change from III to IV is good.

The change from IV to III is bad. (See example 104.)

The change from III to VI is good.
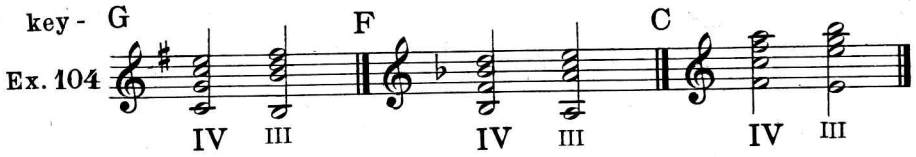
The change from VI to III is good.

The change from IV to II is better than II to IV.

The change from II to I or I to II is allowable in contrary motion.

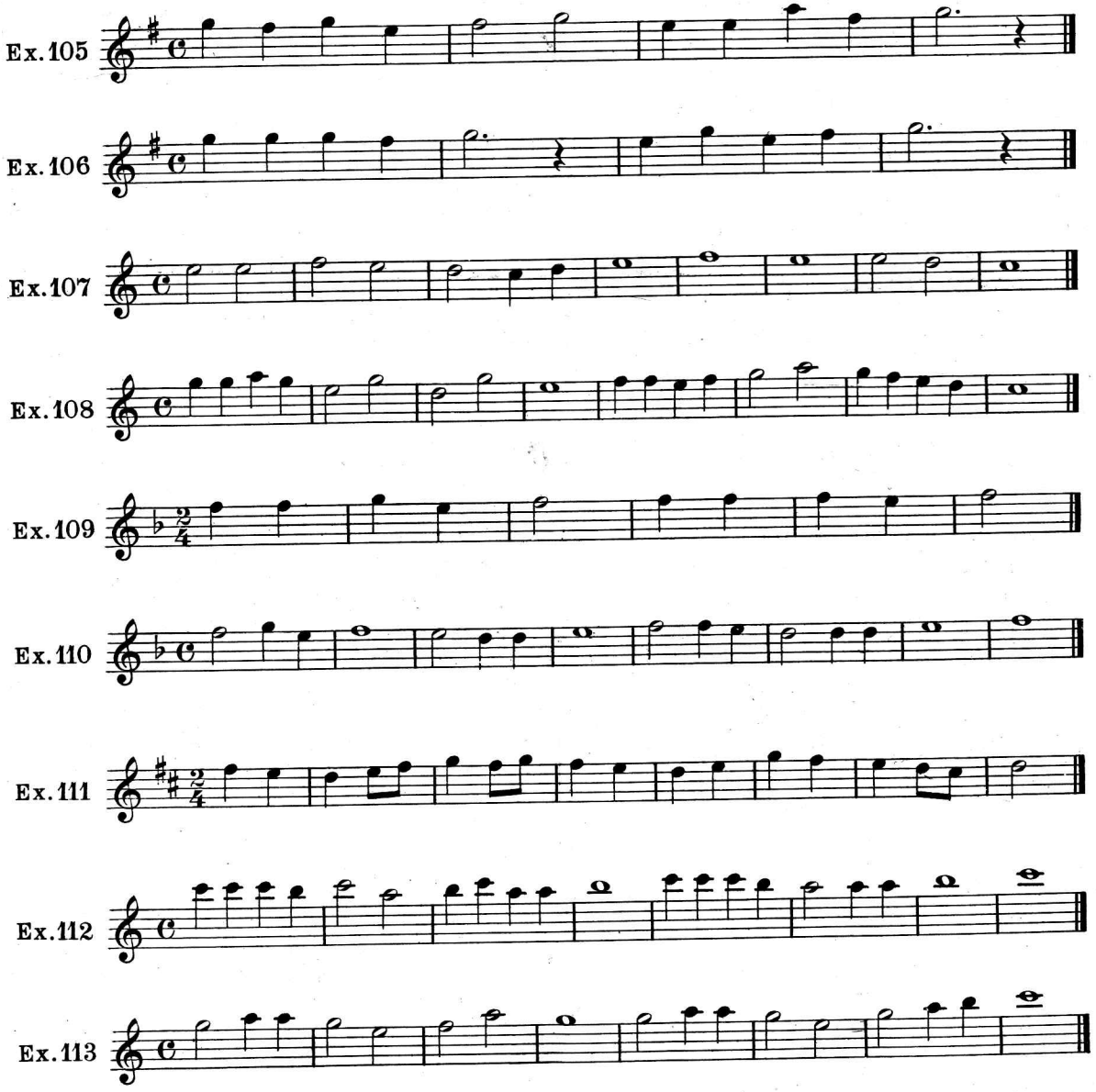
Close each example with the tonic I, preceded by the dominant V.

Care should be taken not to move from the fourth degree IV. to the third degree III, when the soprano has leading-tone in the second chord. The bass C in IV followed by soprano taking F♯ in III, produces the effect of an augmented fourth, called the tritone. Three keys are shown to illustrate this bad effect.



MELODIES

IN THE MAJOR MODE



The previous melodies should be harmonized away from any instrument. After completion they may be played over, and if some chords sound badly an effort made to find the reason without depending on the ear. By comparing certain doubtful progressions with former rules the faults can be easily found and corrected.

When finally completed each exercise should be transposed to another key. If this key is higher, all the notes must be higher; if lower, all must be lower. As an example, if a melody is in C, and you wish to place it in E♭, it will be found that E♭ is a minor third higher than C, therefore, every note must be transposed a minor third higher.

MELODIES

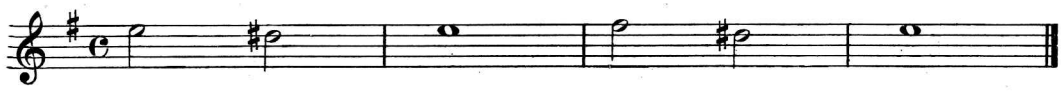
IN THE MINOR MODE

The minor triads are marked thus:- I, II°, III×, IV, V, VI, VII°, Remember that the augmented triad on the third degree and the diminished triad on the leading-tone are not to be used.

Before harmonizing these melodies read over the rules for harmonizing bass notes in the minor mode on page 26.
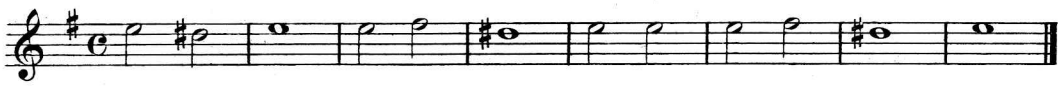
e minor

Ex. 114
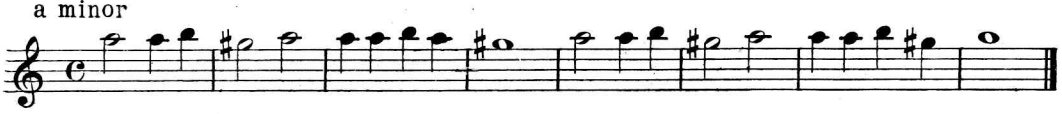


e minor

Ex. 115
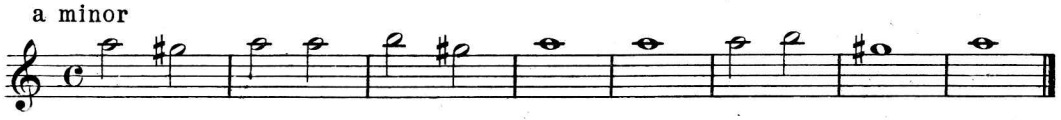


a minor

Ex. 116
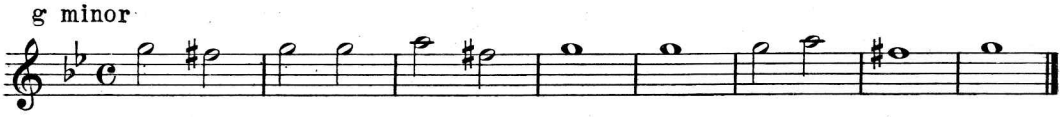


a minor

Ex. 117
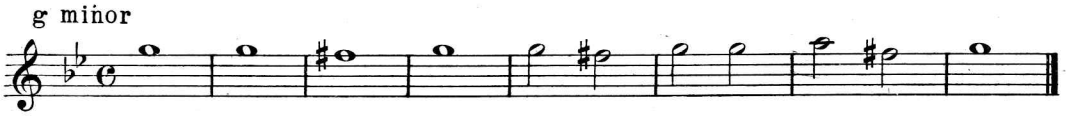


g minor

Ex. 118
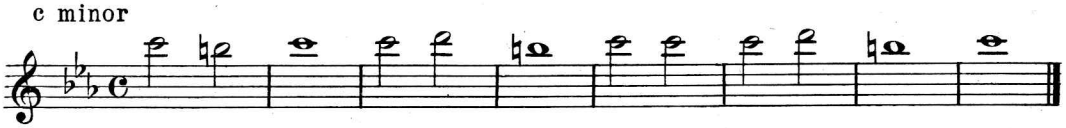


g minor

Ex. 119
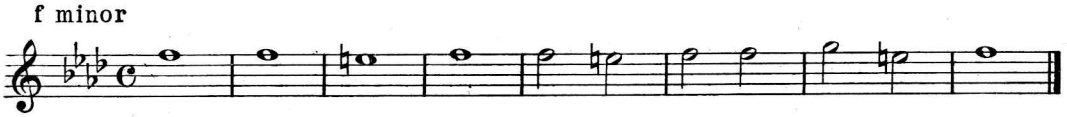


c minor

Ex. 120



f minor

Ex. 121



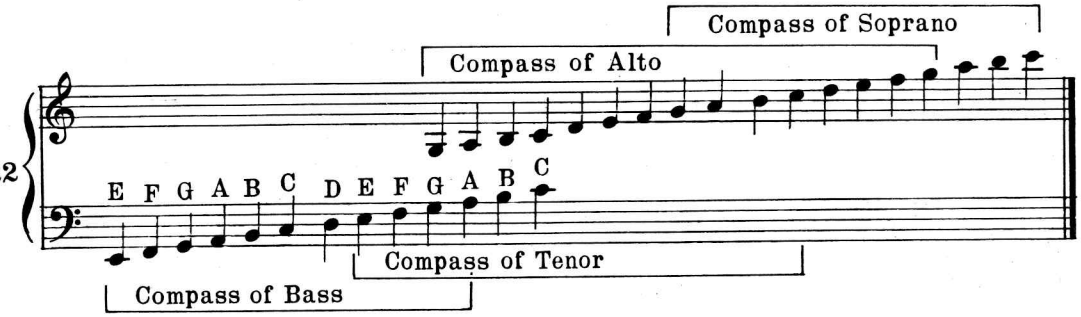
CHAPTER VI

The bass clef — Open Harmony — Figuring the bass notes
Passing-notes — Exercises.

All the preceding exercises being in the treble clef, the different voices were somewhat limitted in their movements; that is - the four voices were close together in each chord. The exercises which follow show these voices dispersed or spread apart, and this necessitates the use of the GREAT STAFF, containing both treble and bass clefs, As the bass clef notes employed extend a little over an octave, they can be easily learned. A knowledge of the bass clef is compulsory when arranging from piano scores.

The following shows the compass of the four voices when writing in the bass and treble clefs:-
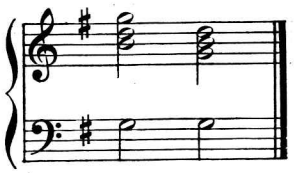
Ex. 122
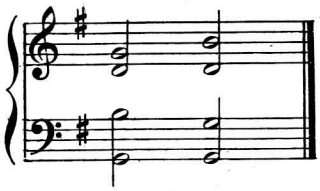


Notes for the bass voice must now be placed in the bass clef, as shown above.

The tenor, when written high, comes in the treble clef; if written low it may be placed in the bass clef.

Chord of G with tenor in treble clef.



Chord of G with tenor in bass clef.



OPEN HARMONY

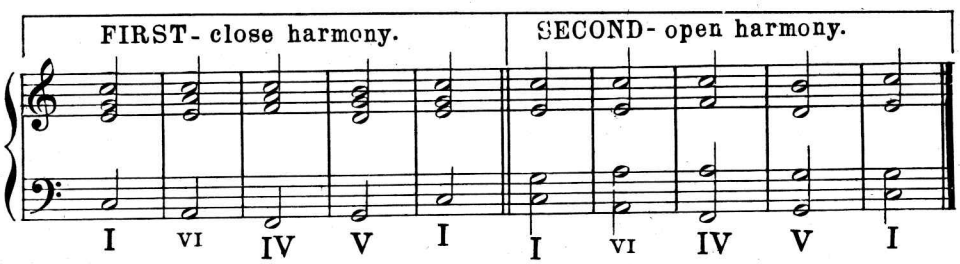
When a chord has the soprano, alto and tenor voices close together, it is termed close harmony.

If the voices are separated or spread apart it becomes open harmony.

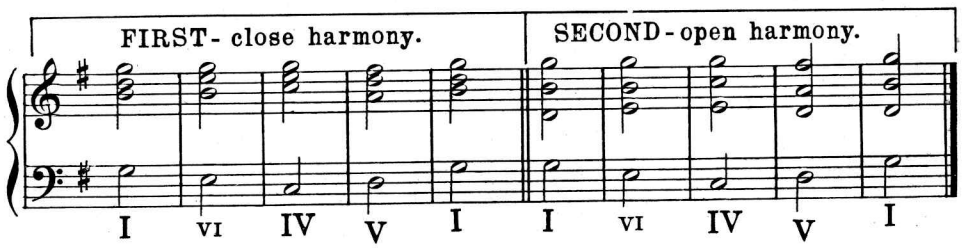
The following examples contain exactly the same harmony, the first being in close harmony, while the second is open harmony.

Ex. 123

The change from close to open harmony is obtained here by lowering the alto an octave, so that it becomes the tenor.



Ex. 124



Open harmony is richer and more sonorous than close harmony, because a separation of the voices gives to each part an individual character. It is much harder to write than when the voices are close together.
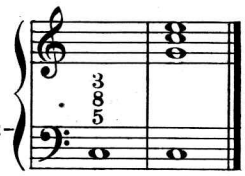
In some exercises open harmony can be employed throughout, while others require a mixture of both open and close positions. Then again, some exercises beginning with open harmony, may end with the voices close together, or the conditions may be reversed.

FIGURING OF BASS NOTES
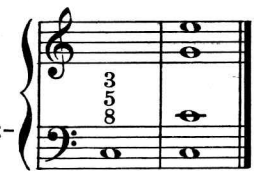
A chord may be represented by a single bass note with certain figures over it, showing the corresponding intervals required to form that chord.

These figures mark the relative positions of the three upper voices above the bass. The figures $\begin{matrix}3\\8\\5\end{matrix}$ would mean that a third from the bass must be in the soprano, an octave from the bass should be in the alto, and a fifth from the bass in the tenor. If a bass note were marked thus:- $\begin{matrix}3\\5\\8\end{matrix}$ it indicates a third from the bass in the soprano, a fifth from the bass for alto, and an octave from the bass in the tenor.

When a bass note is marked $\begin{matrix}3\\8\\5\end{matrix}$ the chord above may be written in close harmony thus:-



When a bass note is marked $\begin{matrix}3\\5\\8\end{matrix}$ the chord above may be written in open harmony thus:-
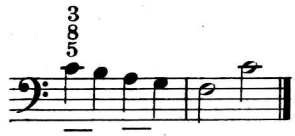


In open harmony the soprano and alto voices should rarely be over an octave apart. The alto and tenor, also should seldom extend an octave apart.
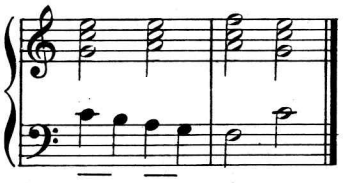
A continuation of bass notes to be harmonized will now be given, so that more freedom is acquired in part writing with figured bass. The position of the first chord generally determines all others, and for that reason, the first bass note is the only one figured in some of the exercises.

While the basses used are the roots of the needed chords, there will sometimes occur one or more notes which do not belong to the harmony, called "passing-notes." This is shown by a horizontal line drawn under the notes, and means that the harmony of the upper voices remains stationary, while the bass moves to the passing-notes indicated.

Figured bass notes marked below showing passing-notes.
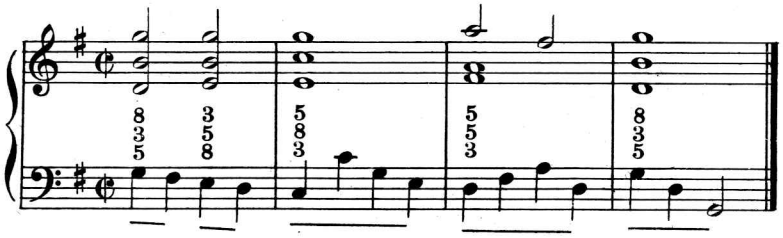


Harmony required for the figured bass just given, showing how the passing-notes are used.



A passing-note which is foreign to the chord, must never be taken nor left by a skip, but should move diatonically from one harmonic note to another, as shown above.

When a passing-note belongs to the harmony it may be taken or left by a skip. Both kinds of passing-note are shown in the following example, the first measure having those foreign to the harmony, and the last three measures containing those which belong to the upper chords.

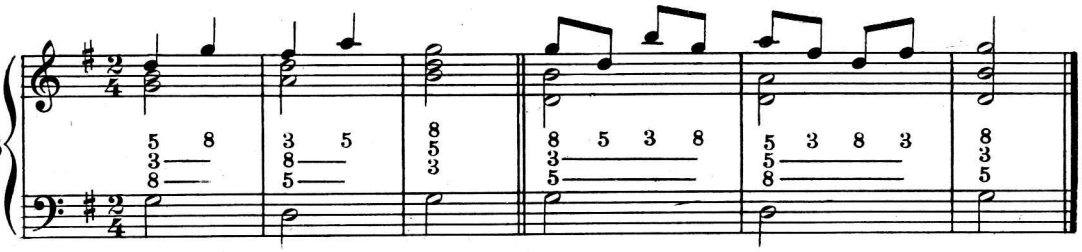
Ex.125



Passing-notes may be introduced in any of the upper voices, providing the rules just given are carefully observed.

While all of the following exercises have the root for a bass, there are many occasions where the introduction of passing-notes in an upper voice, relieves the monotony. Such changes are indicated by altering the figures to show the new interval desired, and drawing a line after the other figures, whose notes are to remain stationary.

Ex. 126
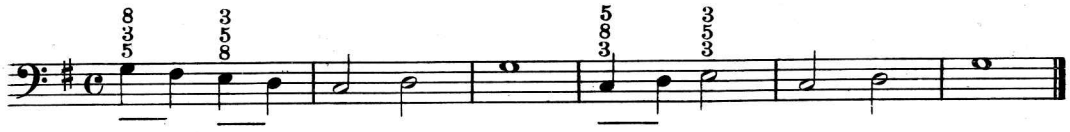


An exercise like the above would show merely the bass notes, with figures over them.
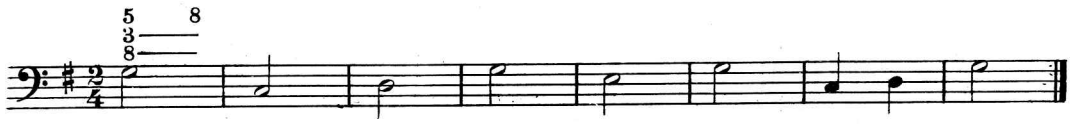
It will thus be seen that in harmonizing these bass notes, many opportunities occur for gaining melodic variety in the upper voices.

EXERCISES
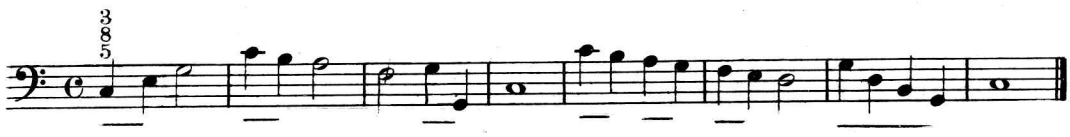
Ex. 127
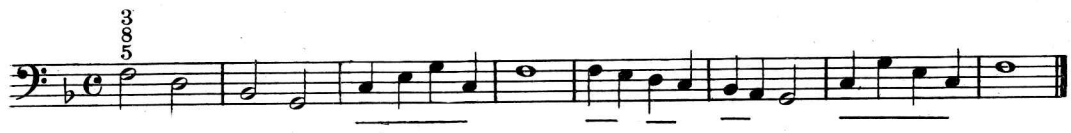


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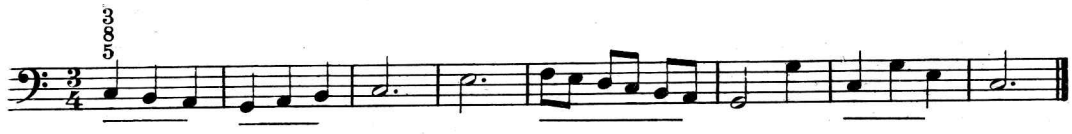


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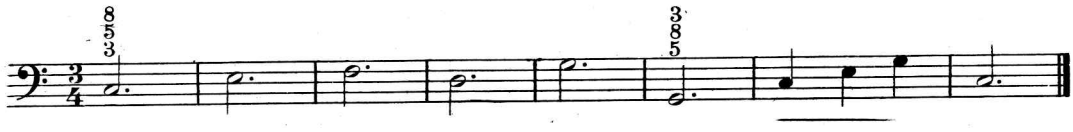


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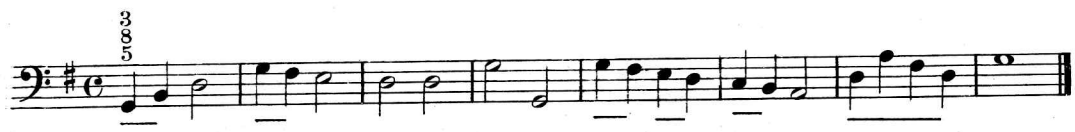


Ex. 131



Ex. 132



Ex. 133



CHAPTER VII

The First Inversion Figured Bass For Each Degree Exercises
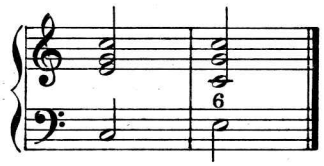
A chord is in its fundamental position when the root is in the bass. If any other note of a chord is in the bass, the chord is said to be inverted.

When the third of a chord is employed for a bass, the chord enters what is termed its first inversion.

All the previous exercises contained only the roots of chords for a bass, even though passing-notes were introduced in the later numbers. The present chapter deals with the first inversion of the bass.

In the following example the first chord of C is in its fundamental position; the second shows the same chord in its first inversion.

Ex. 134



Observe that the bass note E, in the above example, has the figure 6 over it. This indicates that the root of C, stands over the bass note. In other words, 6 shows the bass note to be the third of a triad, meaning the first inversion. By refering to "inverted intervals" on page 11. this will become clearer.
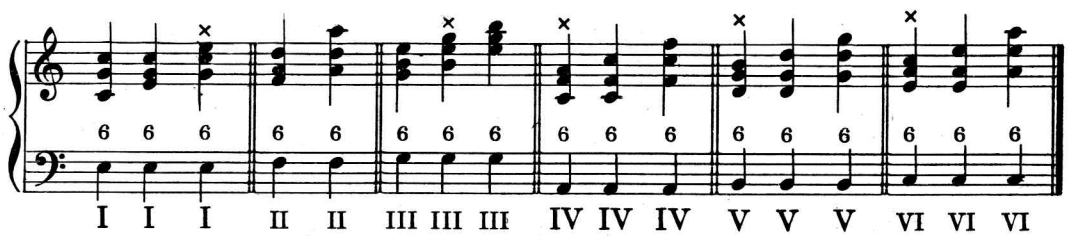
If a bass note B with a 6 over it were given, the G chord must be written; if A in the bass has a 6 on top the F chord is necessary; and a 6 over D would mean the B♭ chord.

The first inversion is often termed "a chord of the 6th." When carefully introduced it produces a charming relief from the constant use of fundamental basses, and for that reason many restrictions with a root bass are softened with the first inversion.

It is customary for the Roman numeral under such a chord to show the root of the chord, with a 6 over the bass. This root note is the best to double among the upper voices, although tnere are exceptions. The first inversion of a chord on the second degree, for example, is often best with the third doubled.

When a chord enters the first inversion the third should not be doubled in the soprano. The following examples show various ways of writing the first inversion; those chords marked × should be avoided when they come on the accented part of a measure.

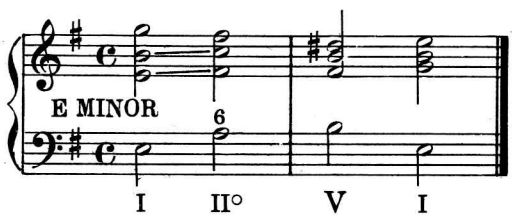
Ex. 135



Some progressions which were disagreeable with root in the bass, become quite acceptable in the first inversion.

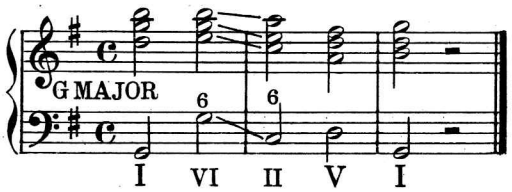
In minor keys consecutive fifths between alto and tenor voices are permitted if the second fifth is diminished.

Ex. 136



In major keys when the succession is from VI to II, all four voices may often move in parallel motion.

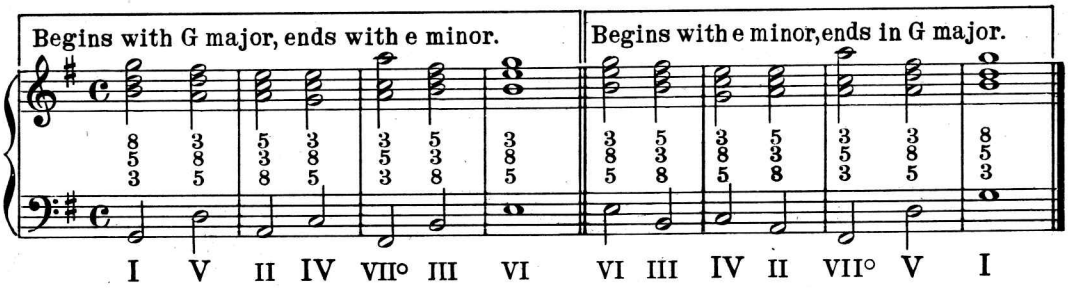
Ex. 137



Both sections of the following example are in G major, although the first part ends with a chord in e minor.
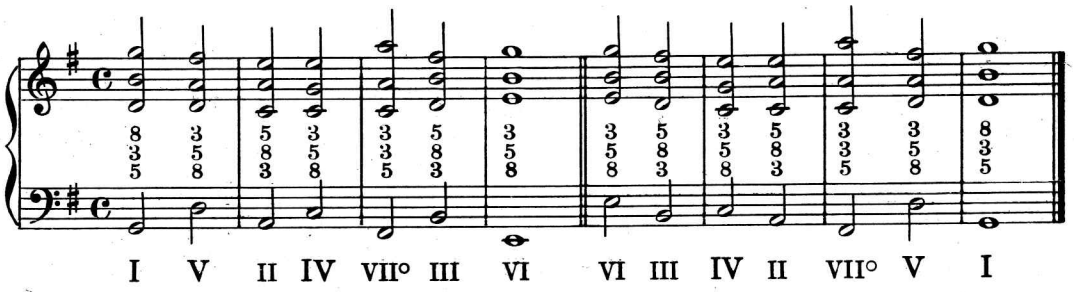
The diminished chord on the leading-tone marked VII° produces an indefinite effect; it is introduced here merely to show the figured bass for every note of the scale.

Ex.138



For open harmony the above basses would be marked as follows:-

Ex.139



In major keys with root for a bass, the triad on the leading-tone is not of much value, being classed as an incomplete dominant 7th chord. In the relative minor, however, this same chord comes on the second degree (marked II°) and here it becomes a very efficient chord. See Example 136 where it is written in the first inversion.

As previously mentioned the root of a chord is the best note to double in the first inversion. Many theorists condemn a doubled 3rd in major triads, while sometimes approving its use in minor triads. The real purpose of chord progression, however, is to make each voice move naturally and, at the same time, be melodious. If the 3rd were never to be doubled in the first inversion, it would often be impossible to preserve a natural movement of the voices in part writing. Bearing this in mind it will be found that the real danger spot to be avoided, is doubling the 3rd in outside voices, that is, between soprano and bass.

As the exercises which follow are confined to four voices, the first inversion of a chord reveals its beauty more clearly than with ordinary instrumental music, where the bass and chords are divided into a simple accompaniment. For that reason a strict adherence to four-voice harmony at this stage, will enable the student to write with more freedom, when the time comes to employ a rhythmical style for accompaning the melody.
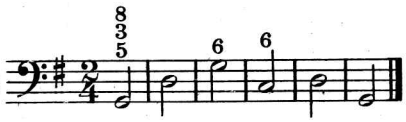
Another important stipulation calls for the use of only consonant triads; there must be no dominant sevenths or other dissonances employed. Such chords will be found among exercises later on.

If the previous exercises have been carefully worked out, all the former rules for harmonizing bass notes will now be appreciated and understood. It is obvious that such rules cannot be printed in this book over and over again; they must be memorized and the only way to remember them is by faithfully working out the exercises.
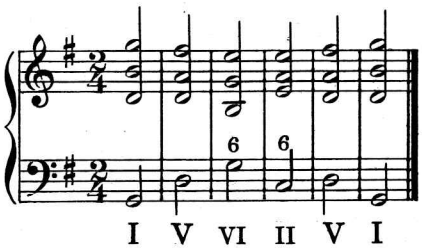
For a successful termination of these studies the quickest and safest road is by numerous examples honestly completed by the student. The mere showing of a chord with its name attached is not enough. The proper use of that chord must be unfolded so that its place among other chords becomes harmonious. There seems to be no other way of gaining this knowledge except by the conscientious study of exercises.

Among the following basses to be harmonized there will be found many in the first inversion. The Roman numeral under a chord in the first inversion should indicate the root of that chord. If the key is G the first inversion of the G chord will have B for a bass with a figure 6 over it. When the chord is completed the Roman numeral underneath must be I, meaning the tonic chord.
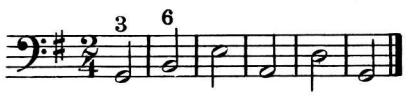
Ex.140



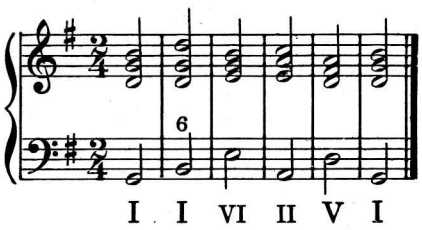
The first chord in this exercise must be in open harmony, the other chords may be written as follows:-



Ex.141
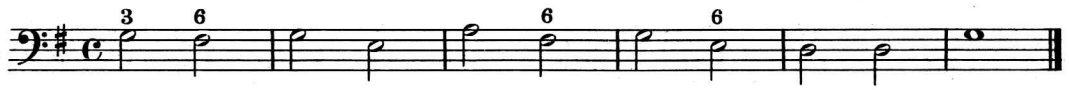


Close harmony, may be used here. In the change from II to V move the three upper voices in contrary motion to the bass.
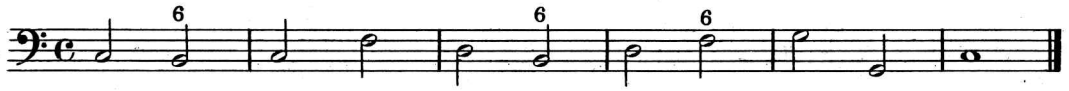


After harmonizing the following basses, transpose each exercise into another key either one tone above or one tone below.
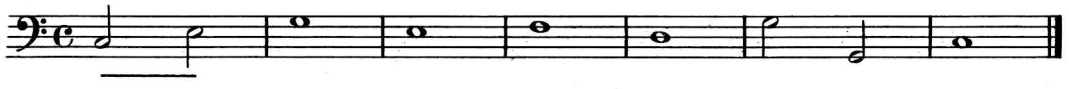
Ex.142
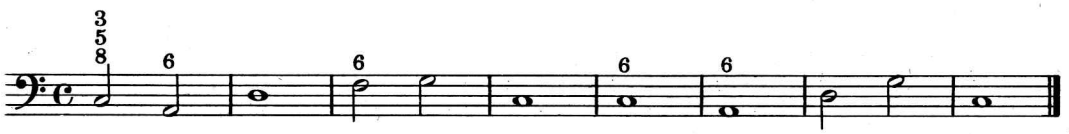


Ex.143



Ex.144
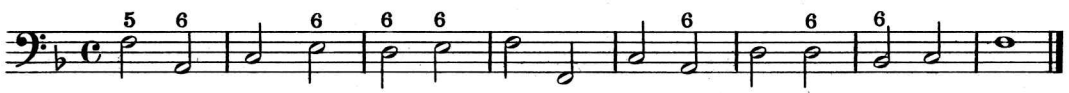


Ex.145



Ex.146



Ex.147



CHAPTER VIII
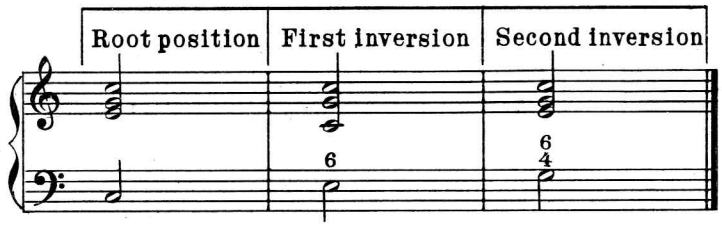
The Second Inversion Exercises

When the fifth of a triad is used for a bass note, the chord enters the second inversion.

Counting upward from this bass, the notes above form the intervals of a fourth and a sixth, consequently the second inversion is termed a six-four chord, and is figured thus:- $\frac{6}{4}$.

As a model for all keys the chord of C is given here, showing the chord in its three positions, with the proper figuring of the bass.

Ex.148



Six-four chords usually double their 5th; that is, the octave of a bass marked $\frac{6}{4}$ generally appears in the chord above.
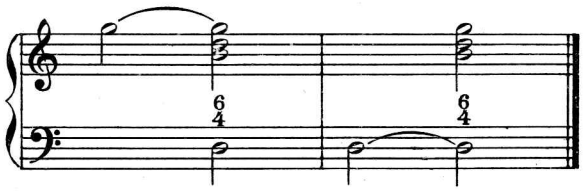
A very powerful effect on the harmony is produced when a chord enters the second inversion, and for that reason all six-four chords (except when on the tonic) must be prepared and resolved as herein described.

In the second inversion of both major and minor chords, there will be the interval of a perfect fourth between the bass note and one of the three upper voices. This perfect fourth in conjunction with the bass note, governs the preparation and resolution of a six-four chord.

One of these notes must have appeared in the preceding chord. A six-four chord is then said to be prepared when either the bass or the perfect fourth have been held over from the previous chord.

In the second inversion of a G chord, the two notes forming this perfect fourth are D and G. The first measure here shows G prepared and the second measure shows D prepared.

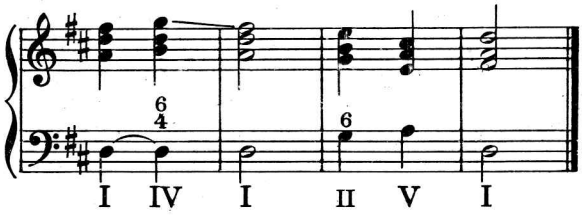
Ex.149



The chord which follows a six-four chord is exceedingly important. Here one of the notes which form the perfect fourth should descend while the other remains stationary. This is termed its resolution.

The D is prepared in the bass here, while the high G descends for the next chord. The Roman numerals show the root of each chord.

Ex.150

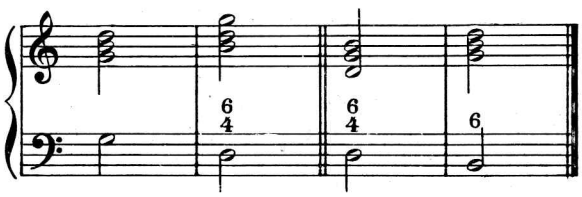


A six-four chord formed on the tonic need not be prepared. Part writing demands that all other major and minor chords in the second inversion be prepared. For instrumental music where bass and chords are divided, this preparation may often be omitted. In four-voice harmony it will be found that a six-four chord, introduced without preparation, generally produces an effect of modulation by weakening the tonality of the chord.

A six-four chord needs no preparation when preceded by another position of the same chord.

When followed by another position of the same chord it needs no resolution.

Ex.151



It should be remembered that when the root of a chord is in the bass, the figuring over this bass may be either 8,5,3, or it may have nothing over it.
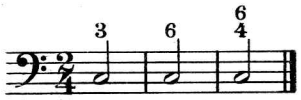
For a chord in the first inversion the bass is figured 6.

When a chord is in the second inversion the bass note is marked $\frac{6}{4}$.

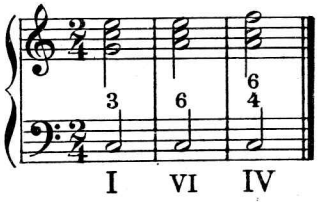
Sometimes it is desireable to place different chords over the same bass. This is shown by special figuring for each chord.

Here we have the bass note C, figured three different ways.

Ex.152
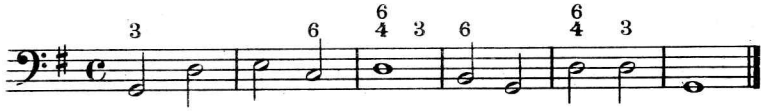


This could be harmonized in the following manner:-



In the exercises below there will be found many six-four chords preceded or followed by other chords having the same bass, and figured like example 152. As a general rule six-four chords are best when built on the tonic (I) sub-dominant (IV) or dominant (V) these being the primary chords.

The first exercise here is completed, in order to show the proper method for harmonizing these bass notes.

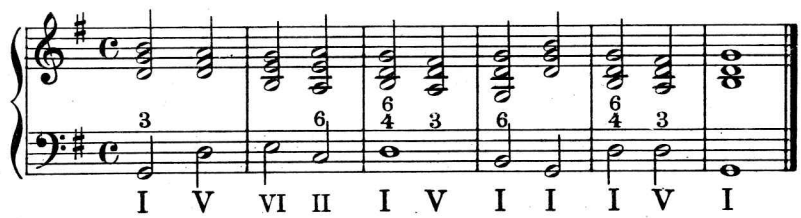
Ex.153
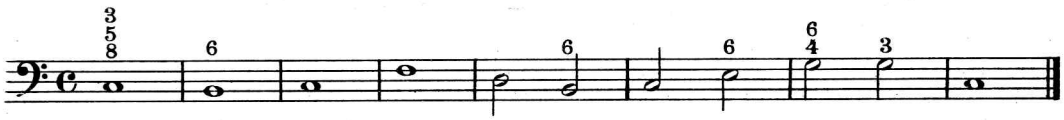


The first chord in the above has its 3rd in the soprano, while the other chords come naturally as shown here:-

Ex.154
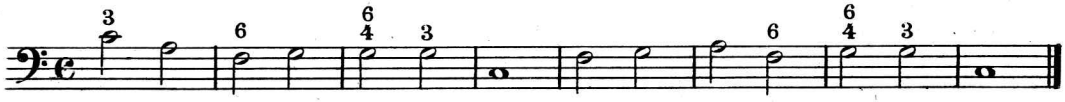
The final chord in every exercise must be the tonic with its root in the bass. Never end with a $\frac{6}{4}$ chord.
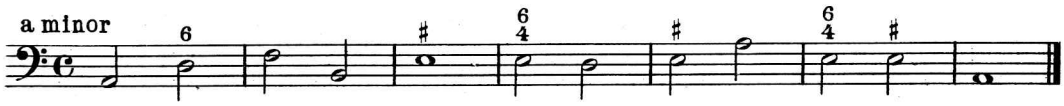


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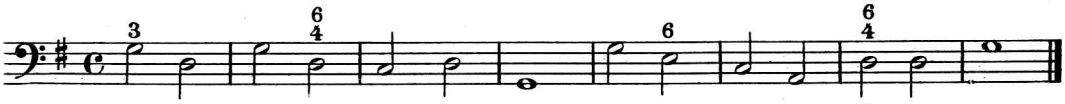


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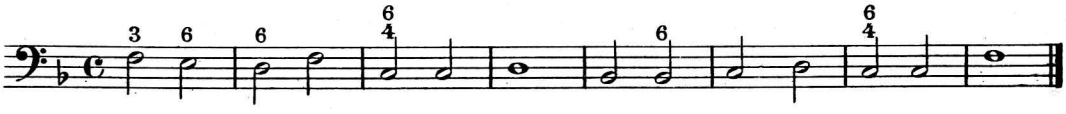


Ex.157



Ex.158



Ex.159
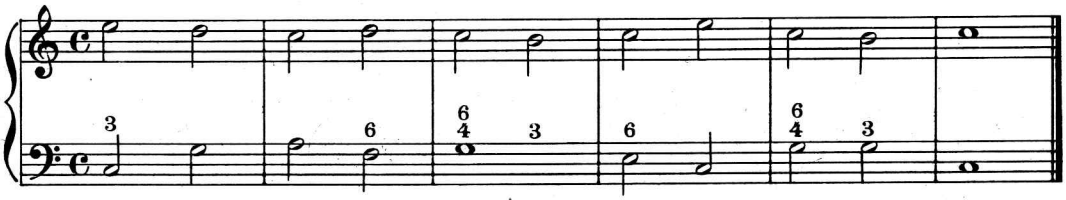


The following exercises include notes for soprano and bass, to which must be added the alto and tenor voices.

Write these studies on blank music paper, carefully marking the figured bass.

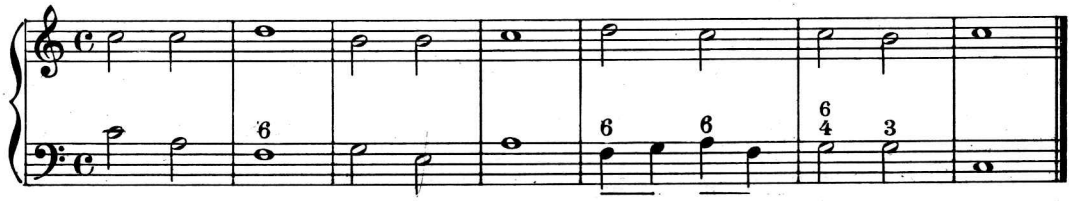
After completing each number, place the proper Roman numerals under the bass.

When finished play each exercise over and observe if any progression is not satisfactory. Errors of this kind should be corrected before proceeding.

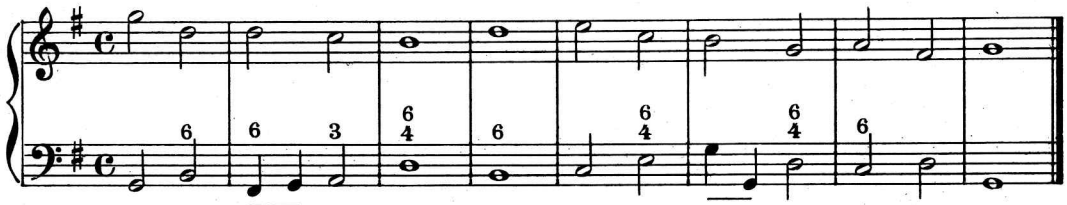
Ex. 160
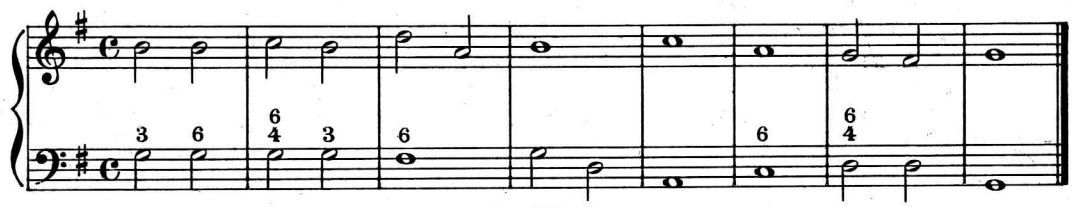


Ex. 161



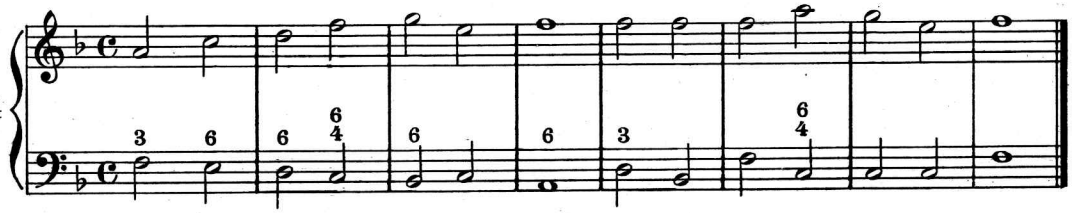
Ex. 162



Ex. 163



Ex. 164



CHAPTER IX

Dissonances The Dominant 7th Examples
Exercises Inversions of The Dominant 7th Exercises

This chapter begins the second division of harmony called dissonances.

A blunt definition of the term dissonance would be a discord, but in harmony it means a chord that will not be accepted by the ear as final, and therefore must be followed by another chord termed its resolution.

A consonance means a chord which, when played alone, will be accepted as final.

A dissonance means a chord which will not be accepted as final, but must be followed by some other chord.

All the previous exercises were made up with consonant chords, although the six-four chord is often regarded by musicians as the connecting link, between consonances and dissonances.
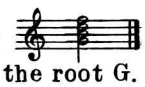
The various intervals which give the chords their character are here reviewed.

PERFECT CONSONANCES	IMPERFECT CONSONANCES	DISSONANCES
Perfect primes.	Major thirds.	All the remaining intervals, such as diminished, augmented, minor 7th etc.
Perfect fourths.	Major sixths.	
Perfect fifths.	Minor thirds.	
Perfect octaves.	Minor sixths.	

Major and minor triads are consonant in all positions, even when one of the notes is doubled to make a four-voice chord.

The notes G. B. D. G represent such a chord, being  the chord of G major with its root doubled.
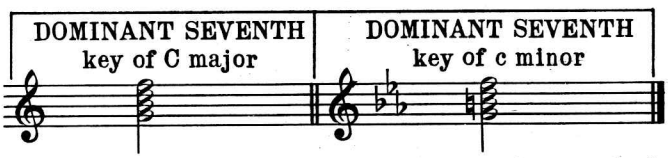
If, however, instead of doubling a note belonging to the chord, we add another note foreign to the triad, we obtain a dissonant chord.

G. B. D. F would be an example of this addition, making  what is termed a chord of the seventh, because the extra note F is a seventh from the root G.

It will thus be seen that a chord of the 7th contains a root, third, fifth and seventh.

An important distinction now becomes necessary in the use of the term seventh. If the student would avoid confusion he will always speak of the seventh degree of a scale as the leading-tone, and reserve the word seventh, or the figure 7, exclusively for the seventh of a chord. The leading-tone is so called because of its melodic tendency to lead to the tonic.

A chord of the 7th may be formed on any degree of the scale, but for the present the only one used will be that which is built from the fifth degree of any major or minor scale. This chord is termed the dominant 7th, and consists of a root, a major third, a perfect fifth and a minor seventh.



This chord needs no preparation in either the major or minor mode, but the chord which follows requires a regular progression of voices called the resolution of the dominant 7th.

RULES FOR THE REGULAR RESOLUTION OF THE DOMINANT SEVENTH

1. The root, when in the bass, ascends a fourth or descends a fifth. When this root is in an upper voice it is held over in the following chord.

2. The 3rd. when in the soprano, must ascend one degree. When the 3rd is in a middle voice it may also ascend one degree if the root descends a fifth. If the root ascends a fourth the 3rd may descend two degrees.

3. The 5th generally descends one degree. It may sometimes ascend one degree to secure a more natural progression of some voice.

4. The 7th should always descend one degree.

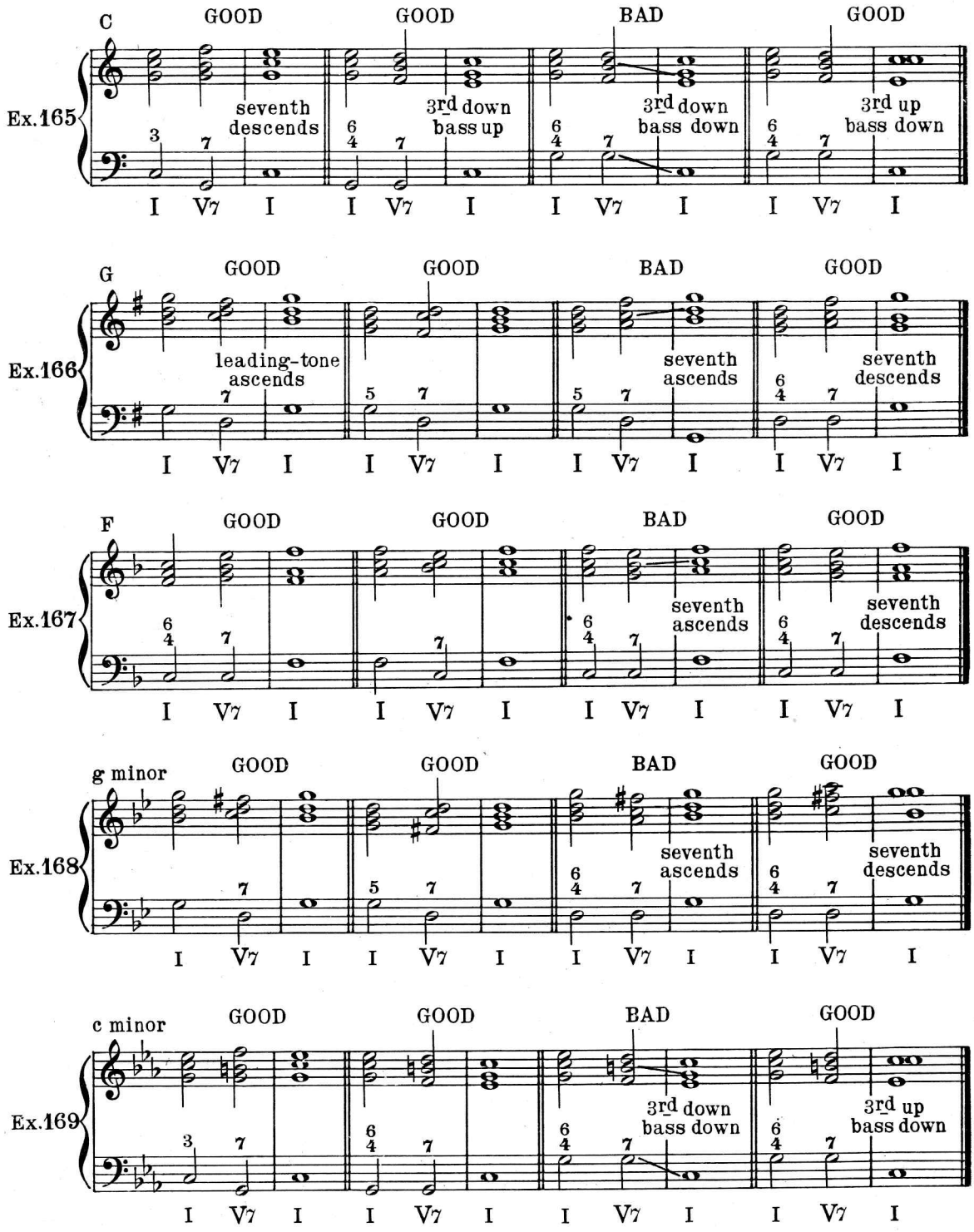
Examples illustrating the above rules are given on the next page. After careful examination it will be seen that the regular or "natural" resolution of a dominant 7th chord is to the tonic.

These examples should be copied many times on blank music paper, after which they should be transposed to other keys.

A figure 7 over a bass note calls for the chord of the 7th.

The Roman numeral marked 7, when placed under a bass, also gives the name of the chord. V7 would mean the dominant 7th.
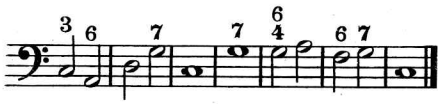
The fifth is often omitted in a dominant 7th chord, in order to obtain a full closing chord.
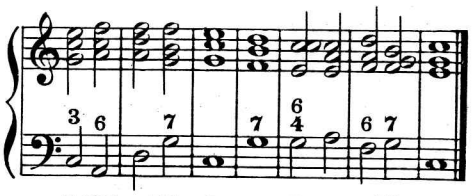


The following basses are to be harmonized. Dominant 7th chords will be found in each example, with the root for a bass.

The first exercise is completed in order to show the method. Notes held over need not be tied, but the Roman numerals are to be continued.

Ex.170



This exercise could be harmonized in the following manner:-
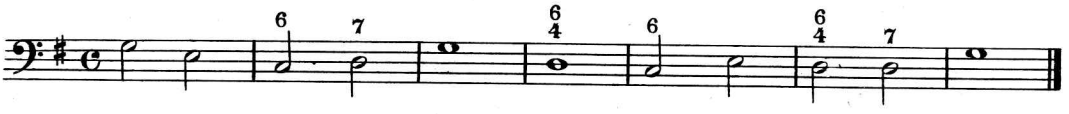


I IV II V7 I V7 I VI II V7 I

Before proceeding with the next study, transpose Example 170 into the key of D, and harmonize the bass again.
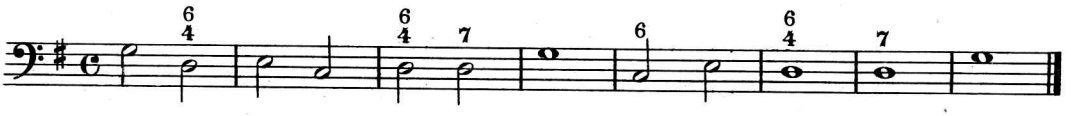
Ex.171
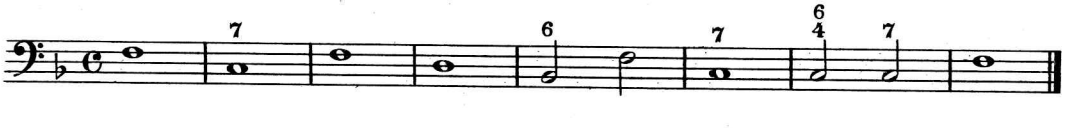


Ex.172
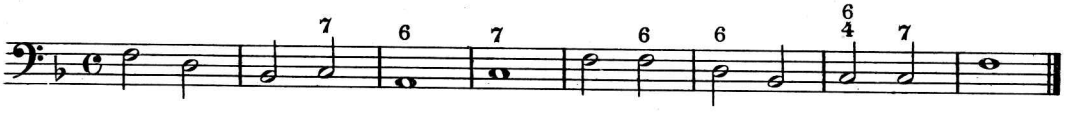


Ex.173



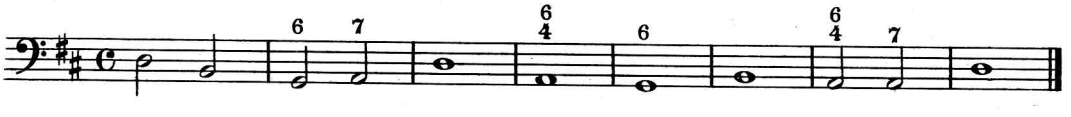
Ex.174
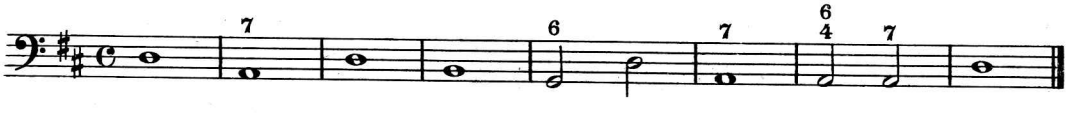


Ex.175
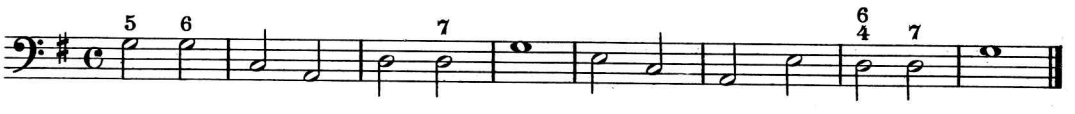


Ex.176



Ex.177



Ex.178



Inversions Of Dominant Seventh Chords

Like major and minor triads, a dominant 7th chord may be inverted so that any interval of the chord may appear in the bass.

With its root in the bass this chord is in the fundamental position.

When the 3rd is in the bass the chord is in the first inversion.

The 5th for a bass means the second inversion.
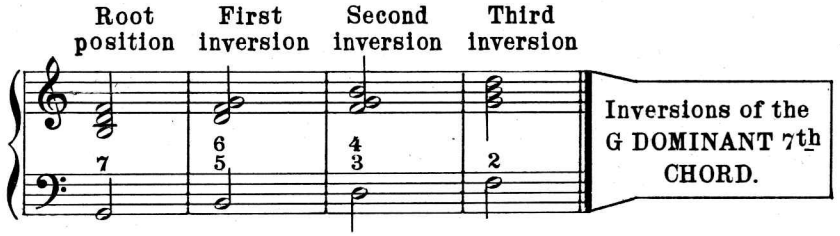
The 7th for a bass brings the chord into the third inversion.

These various positions have their separate figuring which indicates the intervals above the bass notes. While this figuring may consist of three figures, it is customary to reduce the numerals, so that two or even one figure is sufficient to reveal the chord required over a bass. Perhaps this will be clearer by the following letters representing notes in the G dominant 7th chord, arranged in various positions, and showing the proper figures employed over the bass.

ROOT POSITION FIGURED BASS	FIRST INVERSION figured bass	SECOND INVERSION figured bass	THIRD INVERSION figured bass
F-7 or 7 or 7	G-6 or 6	B-6	D-6
D-5 - 5	F-5 - 5	G-4 or 4	B-4 4
B-3	D-3	F-3 - 3	G-2 or 2 or 2
G	B	D	F

Reproduced in musical notation the above would be as follows, with the usual figured bass.

Ex.179



EXPLANATION OF THE ABOVE

ROOT POSITION - From G in the bass to F is a seventh, consequently a figure 7 over the bass reveals the chord, even though F be placed in a middle voice.

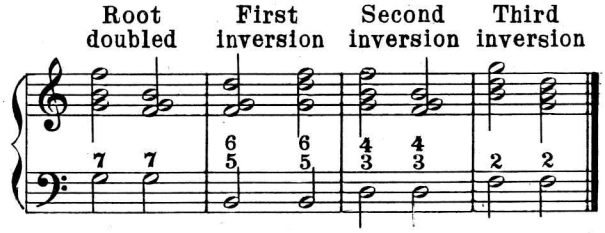
FIRST INVERSION - From B in the bass to G, (the root) is a sixth. From B to F is a fifth. Consequently $\frac{6}{5}$ over the bass denotes the first inversion.

SECOND INVERSION - From D in the bass to G, (the root) is a fourth, and from D to F is a third. Consequently $\frac{4}{3}$ over the bass note denotes the second inversion.
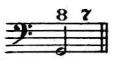
THIRD INVERSION - From F in the bass to G, (the root) is a second, therefore 2 over the bass denotes the third inversion, even though G appears in the soprano, alto or tenor.

When the root of a dominant 7th chord is in the bass, this root may be doubled and the fifth omitted. When the dominant 7th chord is inverted no voice should be omitted or doubled.
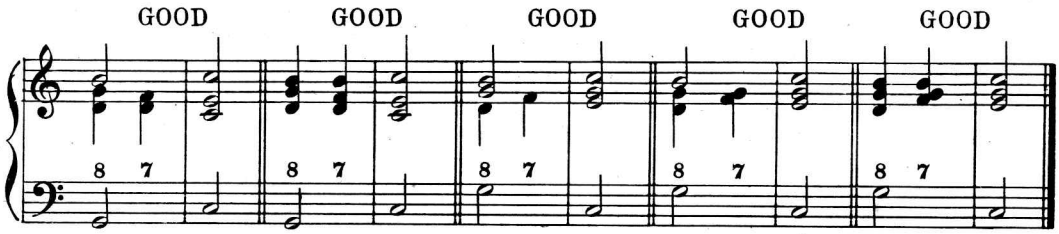
Ex.180



For instrumental music, where the bass and chords are divided, it will be shown later on, where the third and sometimes the seventh, may be doubled in a dominant 7th chord with good effect.
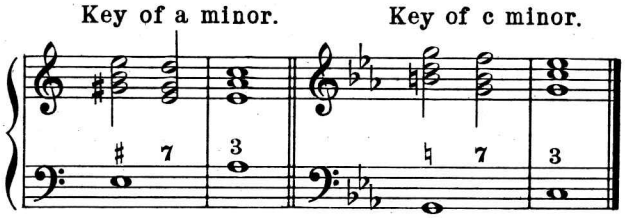
A bass note figured thus  indicates a triad followed by a dominant 7th. This may be written in either of the following ways:-

Ex.181



As explained in Example 82, a sharp, flat or natural over a bass note, means that the third of the chord is to be chromatically altered. If the next chord is a dominant 7th containing the altered note, the effect of the accidental continues. This figuring occurs in minor keys as follows:-
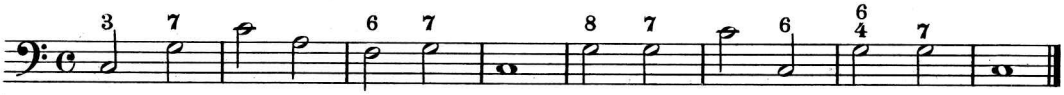
Ex.182



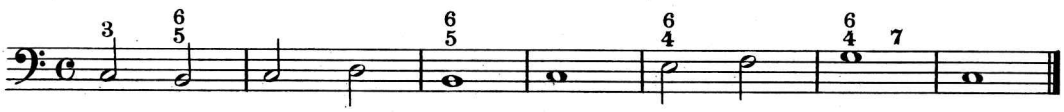
Harmonize the following basses, carefully observing the above rules.

Consecutive fifths between the same voices are permitted when a diminished 5th follows a perfect fifth. Also, consecutive diminished fifths are allowable.
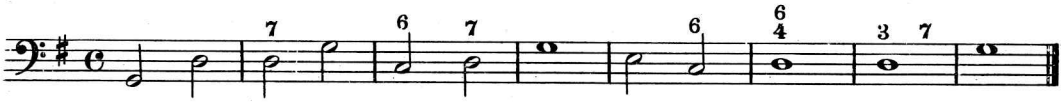
Ex.183
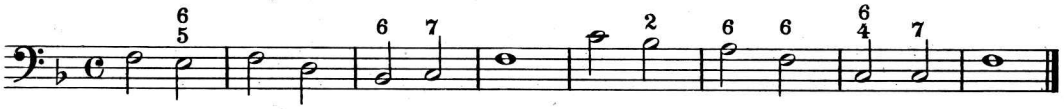


Ex.184
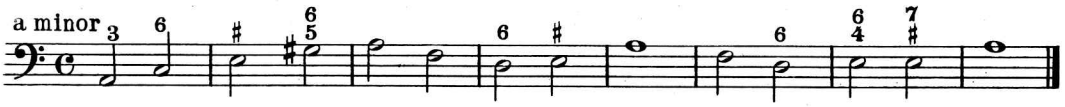


Ex.185



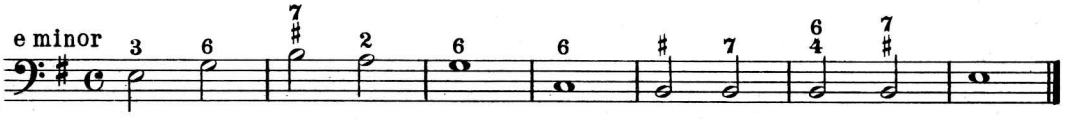
Ex.186



Ex.187



Ex.188



CHAPTER X

Modulation Related Keys Examples Diminished Sevenths Chromatic Changes Suspensions

Modulation signifies the introduction of agreeable chords, so that the harmony flows from one key to another. The essential feature is the method employed in reaching a new key. An abrupt change from the D chord into the chord of A-flat would not be a modulation, but merely a discordant leap in the air. By adding a few intervening chords the gap becomes a delightful modulation, quite pleasing to the ear.

Nearly all text books agree that the study of modulation begins with the dominant 7th chord, this chord being such a powerful factor in establishing the tonality of a key, that it furnishes a simple means of producing harmonious changes.

The terms chord of the seventh and chord of the dominant seventh are appropriate names for describing the intervals which make up the chord.

A triad formed on any note of a scale becomes a chord of the seventh by adding another interval a seventh from the root. This additional note in conjunction with the other intervals (major or minor) determines the character of the chord.

A dominant 7th chord is one which has for its generator the root of a dominant triad to which is added another interval a minor seventh from the root. This distinction is of vital importance in employing the chord. A good plan for quick recognition is to remember that a dominant 7th chord consists of a root, a major third, a perfect fifth and a minor seventh. Bearing this in mind it will be clear that any major triad, can be transformed into a dominant 7th chord by attaching another note a minor seventh from the root.

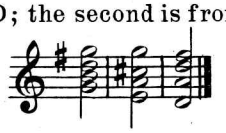
By the use of accidentals it is possible to obtain chromatic changes in the harmony, so that the distinguishing characteristics of a new key are introduced. This would be modulation, and if the connecting chord is the dominant 7th of the new key the change is both agreeable and decisive.
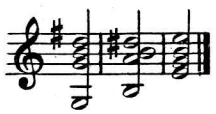
The supreme value of the dominant 7th chord lies in the fact that it determines a tonality, even when heard alone. The G dominant 7th shown here  cannot be in any key with sharps, as its F is natural; nor can it be in any key where B is not natural. Therefore it must be in either C major or c minor.

Other chords of the 7th, built from a major or minor triad with a major seventh, have a vagueness about them that necessitates preparation. These secondary or collateral sevenths, however, may be freely employed as passing-notes.

The dominant 7th creates in the mind a feeling of anticipation and confidence regarding the chord which follows. As previously explained the seventh of this chord is the dissonant note. If the resolution is to a major chord this seventh should resolve down a minor second; if the resolution is to a minor chord the seventh should resolve down a major second.
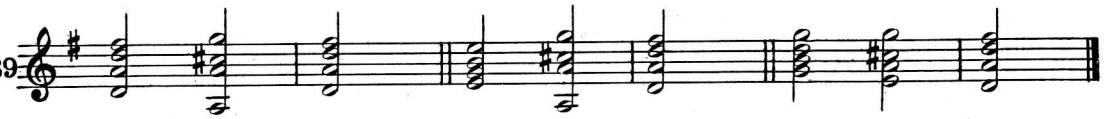
In any modulation two chords at least are necessary to determine a new key. The first modulation shown here is from G to D; the second is from G to e minor.

The second chord here is A dominant 7th, and the dissonant note G descends a minor second into D major. 

The second chord here is B dominant 7th, and the dissonant note A descends a major second into e minor. 

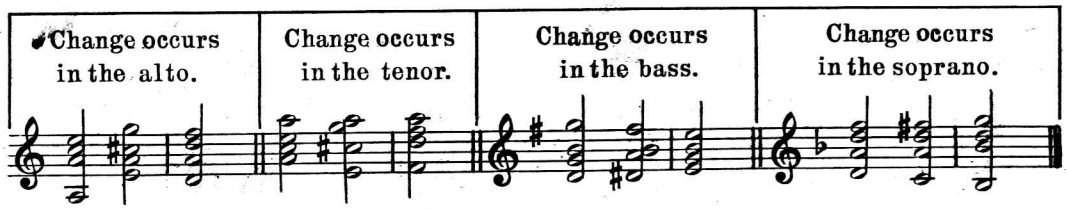
While the dissonant note (the seventh) must resolve downward, it may enter without preparation either diatonically or by a skip. On the other hand if this dissonant note appeared in the preceeding chord it is often better to retain it in the same voice.

Dissonant note G enters diatonically — Dissonant note G enters by a skip — Dissonant note G retained in same voice

Ex. 189 

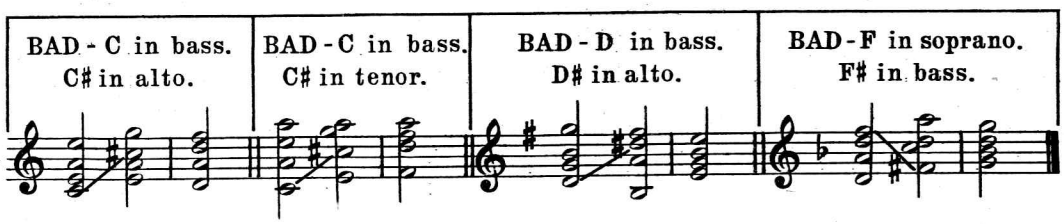
When a note to be chromatically altered, has appeared in the preceding chord, the change should be made in the same voice. If C, for example, is in the alto and the next chord requires C-sharp, the alteration. must be secured in the alto.

Ex. 190



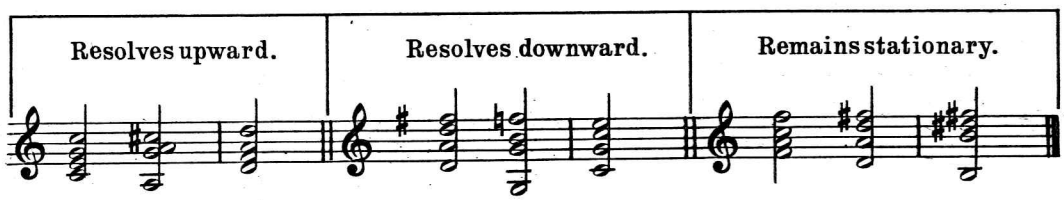
When a note appears in one voice of a chord, followed by another chord with the same note chromatically altered in another voice, it produces a harsh affect called false-relation.

Ex. 191



A note chromatically raised should resolve to the note a semitone above. A note chromatically lowered resolves a semitone downward. Instead of these two resolutions an altered note may remain stationary, and form part of the next chord.
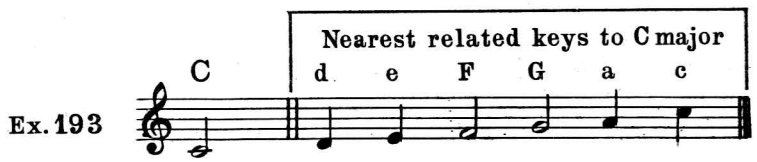
Ex. 192



It will be found that keys which are spoken of as related, have many notes in common and a modulation that does not introduce some of these relative notes is weak and undecisive. In Chapter I the various closely related keys are shown forming the "Harmonic Circle."

The nearest related keys to C major are its dominant (G major,) its sub-dominant (F major,) and the relative minor (a minor.) Next in order comes the relative minors of its dominant and sub-dominant (e and d minor,) and its own minor (c minor.) These relative keys may be represented as follows:

Ex. 193



With suitable positions of the C major chord a modulation can be secured into any one of the above keys, by inserting the dominant 7th chord from the new key.

If, however, we desire to modulate further, each additional sharp or flat in the signature, places the new key a greater distance from C, and necessitates additional chords before a smooth effect is possible.
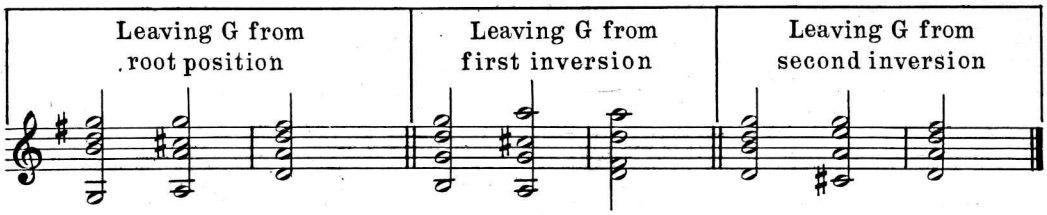
An abrubt modulation is one which leads into a remote key with few chords.

A transient modulation passes through keys but does not remain in them.

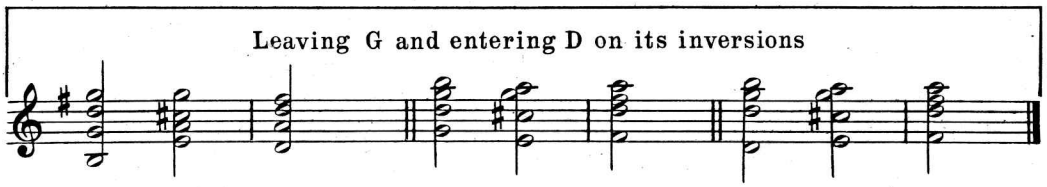
A permanent modulation firmly establishes and maintains the tonality of a new key.

The following examples should be copied on blank music paper, and then transposed into all other keys up to four sharps and four flats. Example 194 shows the method of leaving G, from root position and inversions, into the dominant D. Example 195 shows the method of leaving G and entering D on inversions of the dominant.

Ex. 194

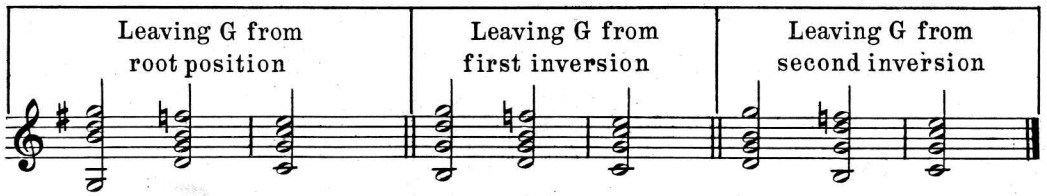


Ex. 195



The next modulation is from G in its root position and inversions, into C, the sub-dominant.

Ex. 196
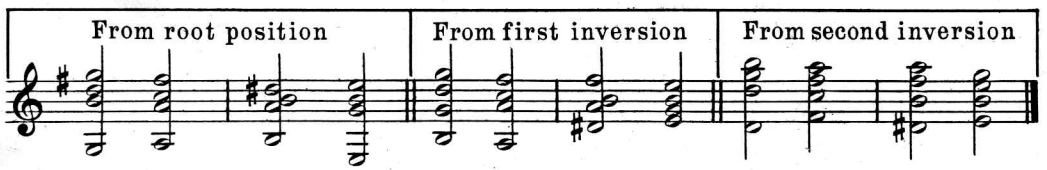


A modulation from G to its relative minor (e minor,) is also accomplished by introducing the the dominant 7th of the new key.

The second chord in each example here is diminished triad, and should be considered as a chord formed on the second degree of e minor. This chord is helpful in determining a modulation.

The augmented fourth (from A to D♯) in the bass, is allowable when, as here, the harmony takes the form of a sequence.
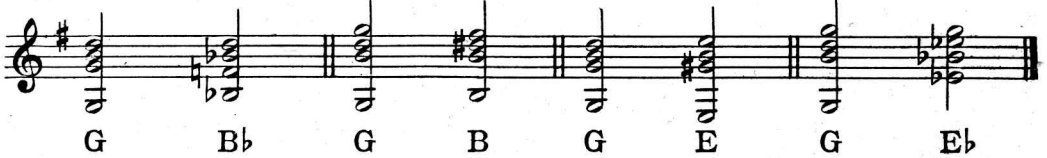
Ex. 197



Modulations to remote keys are affective only when the necessary changes are smooth, and of ample duration in preparing a new key. If the modulating chords have some notes in common, the departure from one key to another will be natural and satisfactory.

A modulation to a remote key cannot be determined by one chord, even though the changed chord has notes foreign to the main key. A passage may include chords containing notes foreign to the old key without destroying its tonality. Such passage would be termed "borrowed chords" or "passing modulation." A few examples are given here, showing how major chords may follow one another, if they contain one note in common.

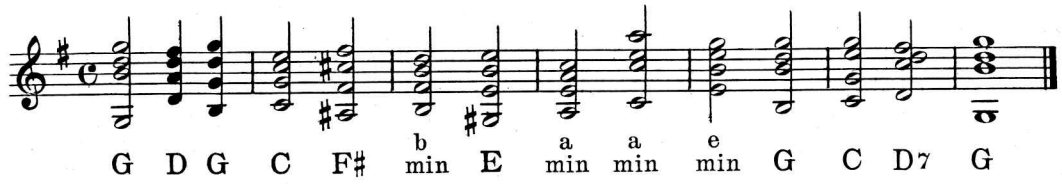
Ex. 198
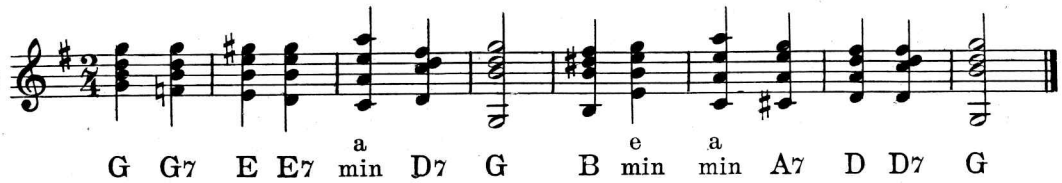


Examples 199 and 200 show the effect of passing modulations. In playing these over it will be seen the tonality of G remains throughout the passage.

In example 201 the prolonged duration of the altered chords has changed the key into B-flat.

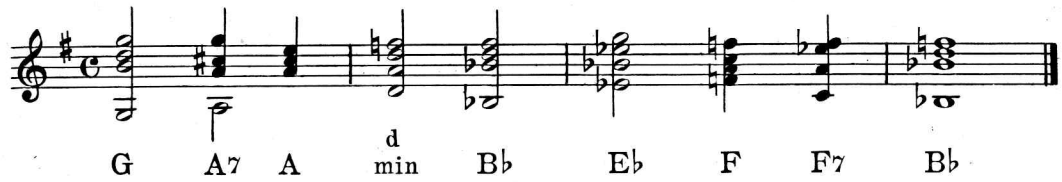
Ex. 199



Ex. 200
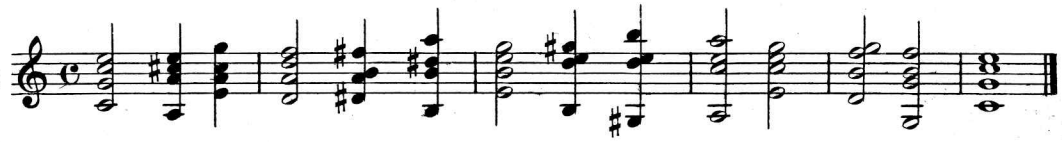


Ex. 201
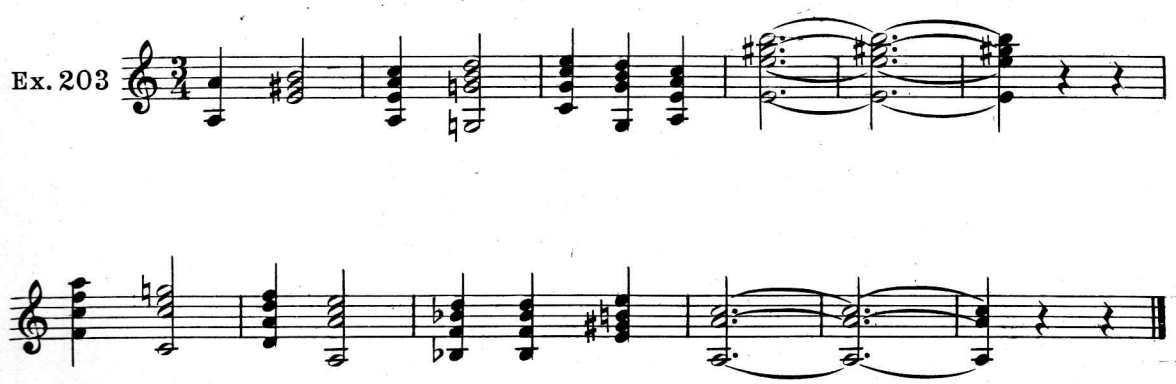


Here the various changes lead to d minor, e minor, a minor and finally C major.

Ex. 202



This last is an extract by Flotow, and illustrates several changes from a minor through different chords to B♭ major, and finally ends on a minor.

Ex. 203
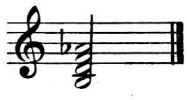


Diminished Seventh Chords

A diminished 7th chord is one in which both the triad and its seventh are diminished.

The chord of the leading-tone seventh shown here, is not a diminished 7th, for while the triad is diminished the 7th is minor.



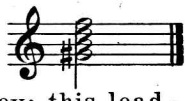
By lowering the seventh one half-step this chord becomes a diminished 7th.



The G dominant 7th shown here consists of a major triad and a minor seventh.



By raising the root one half-step this chord becomes a diminished 7th.



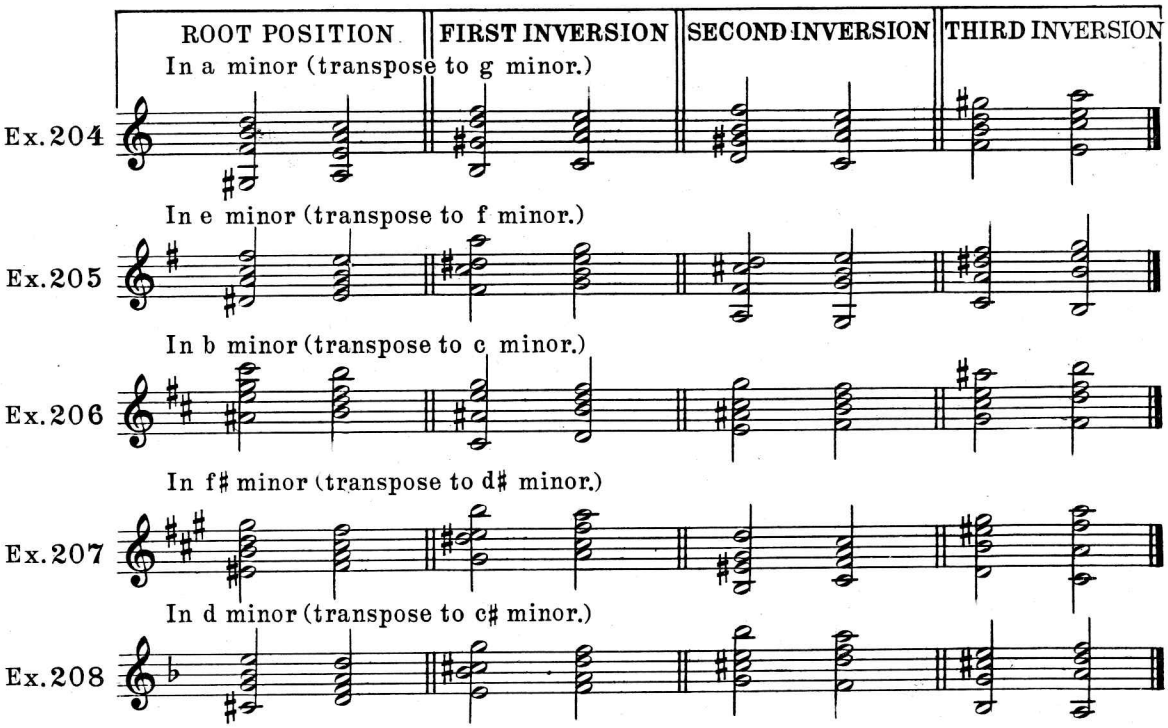
A diminished 7th chord has for its foundation the leading-tone of a minor key; this leading-tone being the root we add the second, fourth and sixth degrees of the harmonic minor scale for completing the chord. On examination it will be found a collection of minor thirds, and its most natural progression is to the tonic of the minor. It is such a pliant chord, however, that it requires no preparation or special resolution. For instrumental music its resolution may be either major or minor, and consecutive diminished 7th chords may be properly used in both ascending or descending passages.

As the name of a chord springs from the root, the proper nomenclature in speaking of this chord, depends on the root note. If this root is G, for example, the regular resolution of the chord would be a-flat minor. On the other hand a diminished 7th chord in g (the key of g-minor,) has for its root F♯, the leading tone of that key, and its natural resolution would be to the triad of g-minor.

Regular Resolution Of The Diminished Seventh

1. The root ascends one degree.
2. The third, when below the seventh, must ascend one degree. If above the seventh this third may descend one degree.
3. The fifth may ascend one degree but usually descends one.
4. The seventh of this chord always descends one degree.

The examples below show the regular resolutions of the diminished 7th chord in root positions and inversions. These should be copied many times and then transposed to the keys marked.



Notation Of Diminished 7th Chords

Every diminished 7th chord, through enharmonic changes, belongs to four different keys. In consequence of this there are but three groups of diminished 7th chords possible in our modern chromatic scale.

The wonderful pliancy of the diminished 7th chord is the result of its peculiar construction in a series of minor thirds, and this enables any note of the chord to be regarded as the root.

A handy reference table of diminished 7th chords is given below, with their resolutions into either the minor or major keys. The proper name of each chord springs from the first letter in every collection of four notes.

	NOTATION OF CHORD	RESOLUTION OF CHORD
FIRST GROUP	B - D - F - A♭	Resolves to either c minor or C major.
	G♯ - B - D - F	,, ,, ,, a minor or A major.
	E♯ - G♯ - B - D	,, ,, ,, f♯ minor or F♯ major.
	C× - E♯ - G♯ - B	,, ,, ,, d♯ minor or D♯ major.
SECOND GROUP	F♯ - A - C - E♭	Resolves to g minor or G major.
	D♯ - F♯ - A - C	,, ,, e minor or E major.
	B♯ - D♯ - F♯ - A	,, ,, c♯ minor or C♯ major.
	G× - B♯ - D♯ - F♯	,, ,, a♯ minor or A♯ major.
THIRD GROUP	C♯ - E - G - B♭	Resolves to d minor or D major.
	A♯ - C♯ - E - G	,, ,, b minor or B major.
	F× - A♯ - C♯ - E	,, ,, g minor or G major.
	D× - F× - A♯ - C♯	,, ,, e♯ minor or E♯ major.

Chords Of The Ninth
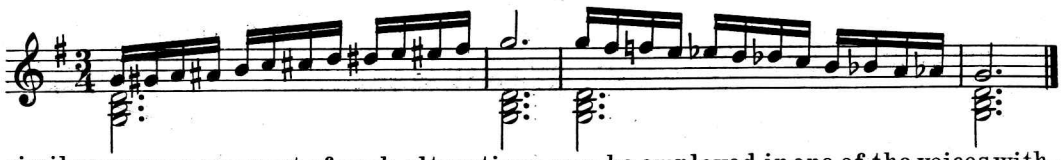
A chord of the dominant ninth is formed by adding another third to a dominant seventh chord. If this added third is major the chord is a major ninth; If the added third is minor, the chord is a minor ninth. This interval of a ninth is a dissonance, and like the seventh resolves downward. Its most effective position is in the soprano voice.

Chords of the ninth, eleventh and thirteenth may be regarded as parts or suspensions of other chords.

Chromatic Changes

A chord may be sustained while a chromatic run occurs in one of the voices. The descending or ascending chromatic scale can thus be introduced while sustaining the chord of G, without destroying the tonality or causing a contradictory effect.

Ex.209
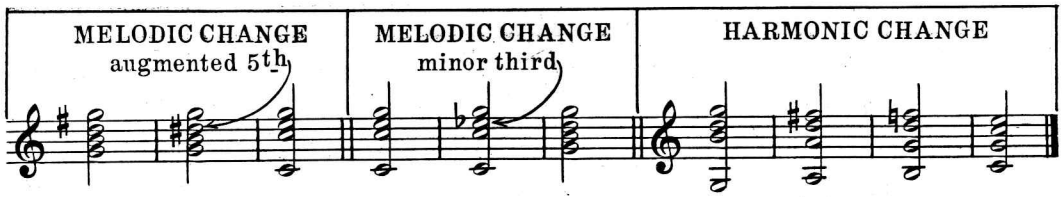


In a similar manner any part of such alterations may be employed in one of the voices without changing the key.

A note chromatically raised naturally ascends to the next degree. A note chromatically lowered naturally descends to the next degree. When such changes are of melodic character, their introduction softens the progression of that particular voice.

A major chord with its fifth chromatically raised becomes augmented.

A major chord with its third chromatically lowered becomes minor.

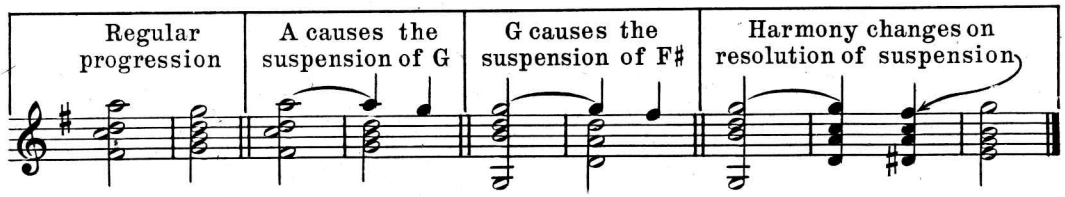
Ex.210
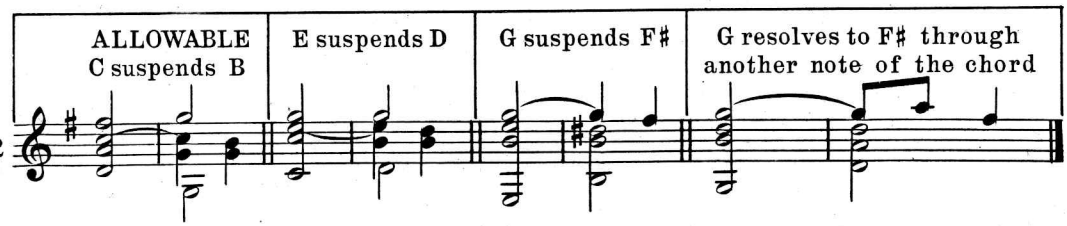


SUSPENSIONS

When a note in a chord is prolonged into the next chord to which it does not belong, it forms a dissonance termed suspension. The name is appropriate because the prolonged note delays a part of the chord in which it has been extended. Any note of a chord may be used if prepared, and two suspensions may properly occur at the same time. The note which causes a suspension is generally higher than the one displaced, and resolves downward; when lower it resolves upward and is termed "inverted suspension." The note in the first chord is termed the preparation, the extension of this note into the second chord is the suspension, and moving this foreign note to its place in the second chord is the resolution.

Ex.211



Ex.212



CHAPTER XI
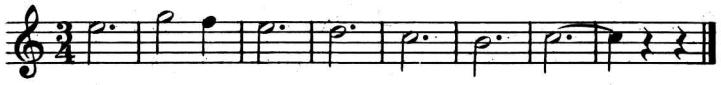
The free instrumental style Examples Cadences Notation and compass of fretted instruments.

All the exercises thus far were confined to four voices, in order that a clear understanding be gained of harmonic progression and the relation of chords. If these studies have been carefully worked out it will now be quite easy to write the harmonies in free instrumental style, where bass and chords are divided in the form of an accompaniment. More freedom is allowed here in doubling the notes of a chord, especially bass notes, even when this bass is the third of a chord or its first inversion. The rule for doubling this third between bass and soprano (melody note) should be remembered and strictly adhered to.

The most effective design for ordinary instrumental music is to have the bass come on the accented beat of the measure, followed by chords on the unaccented beats. This bass or fundamental note may frequently be written with the melody note as its sole companion, when the two come on the accented part of the measure, followed by the necessary chords to complete the harmony. The time in which a selection stands, is the governing factor in thus dividing bass and chords. In triple time the bass appears at the first beat of each measure, while the chords are placed at the second and third beats. By this method the bass and chords, although separated, reveal more clearly the rhythm of the piece. In common time the bass also takes the first count and sometimes another accented beat of a measure; while the chords follow on the less important beats. It will thus be seen that an effective division between bass and chords depends on constant observance of the tempo.
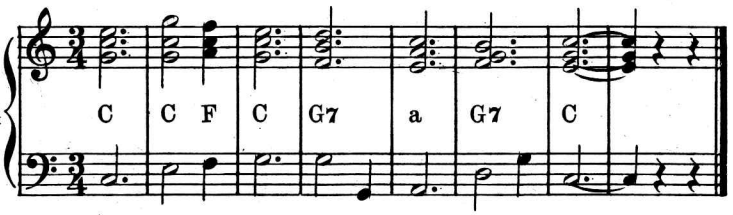
A preliminary exercise is given here, showing a waltz melody to be arranged as described. A good plan would be to first harmonize it with four voices before trying the free style. Two methods of harmonizing are shown.

Ex.213



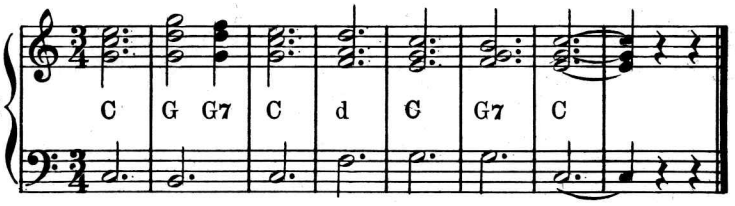
FIRST METHOD - Notice the a minor chord in the 5th measure.

Ex.214
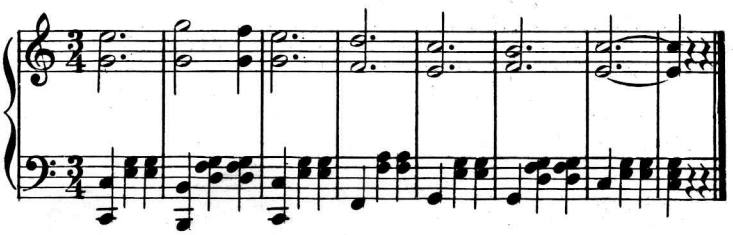


SECOND METHOD - Notice the changes in 2nd, 4th and 5th measures.

Ex.215
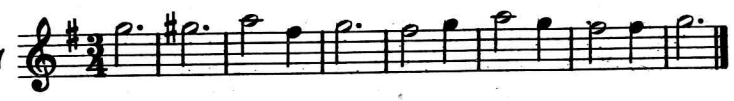


FINAL METHOD - A simple arrangement of No. 215, showing how the bass and chords may be divided.

Ex.216
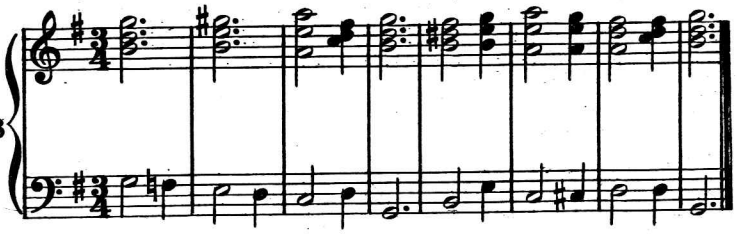


Another melody in the key of G, to be harmonized like the previous one.

Ex.217
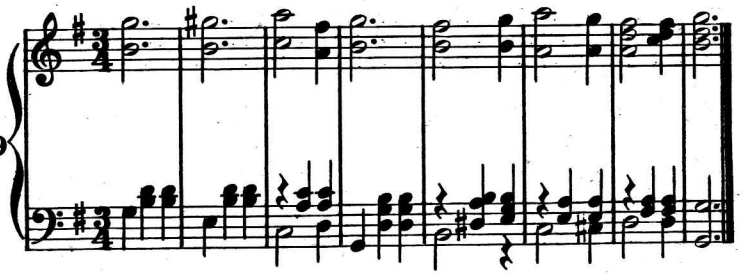


FIRST METHOD- Passing-notes in the bass are introduced here in the first two measures.

Ex.218



FINAL METHOD- Accompaniment in the free style, omitting passing-notes in the bass.

Ex.219
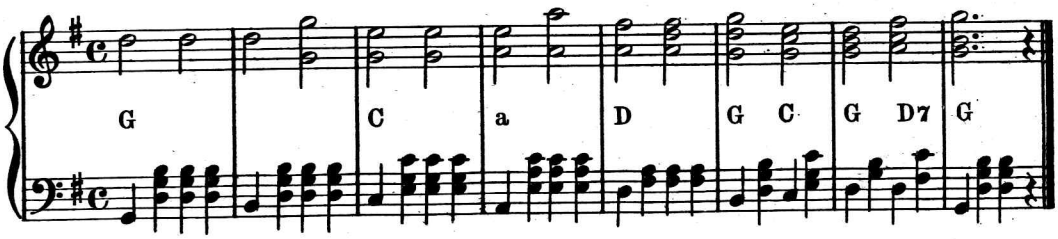


Harmonize the following melody in common time. Two methods are shown.

Ex. 220
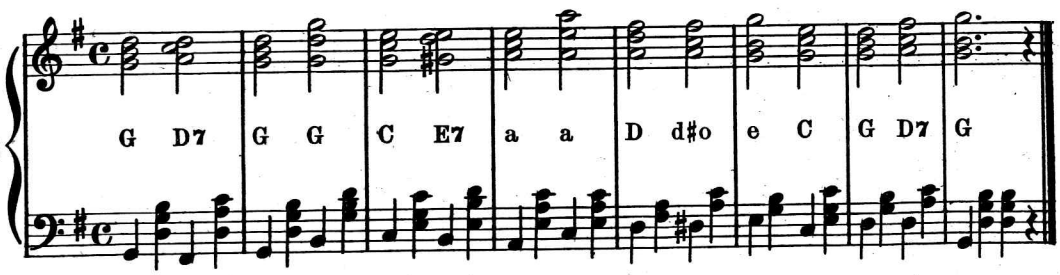


The arrangement given below has very few changes in the harmony, consequently it produces an effect of monotony.

Ex.221



This same melody with a few more changes in the chords, will be found acceptable.

Ex.222
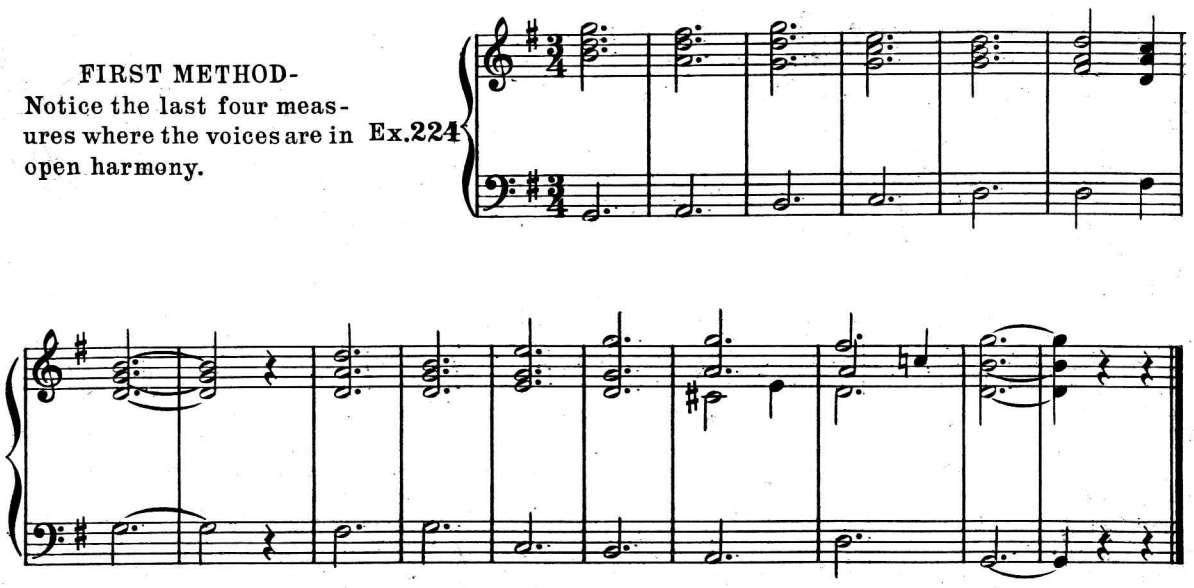


Another waltz melody somewhat more difficult to harmonize, on account of the high G being repeated so many times.

Ex. 223
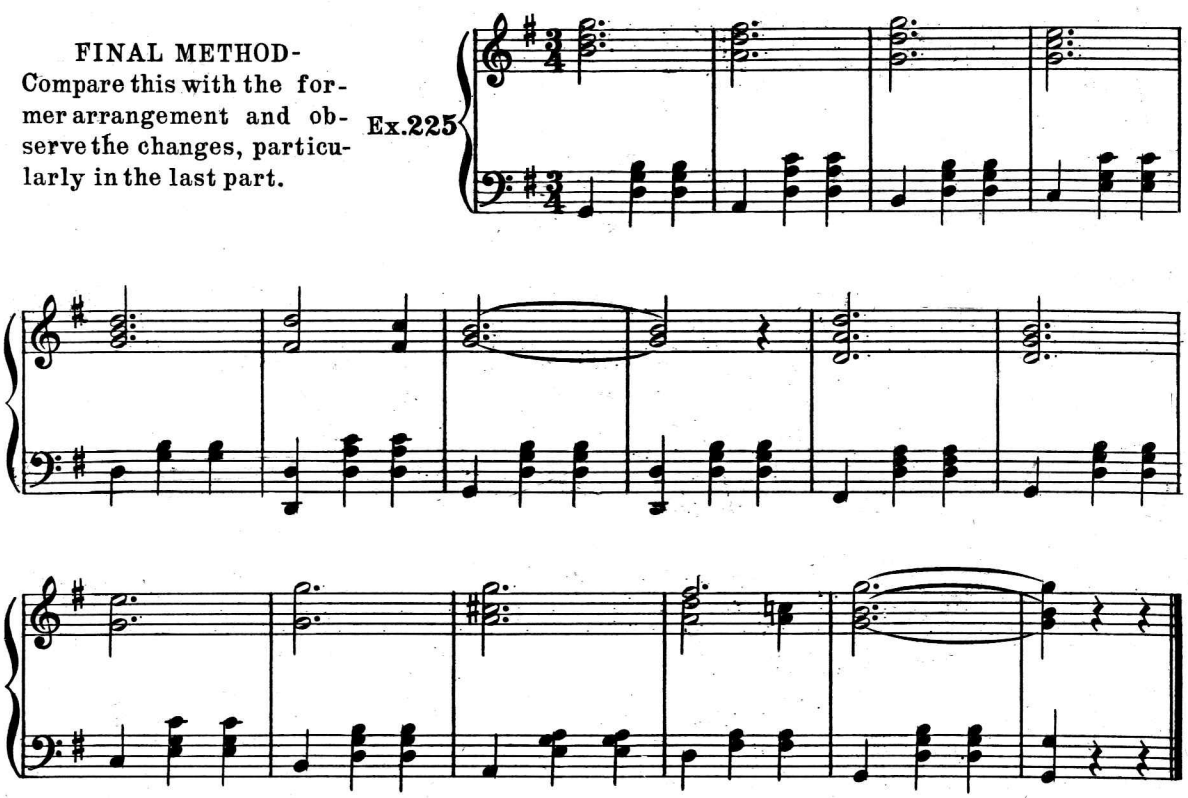


FIRST METHOD-
Notice the last four measures where the voices are in open harmony.

Ex. 224



FINAL METHOD-
Compare this with the former arrangement and observe the changes, particularly in the last part.

Ex. 225

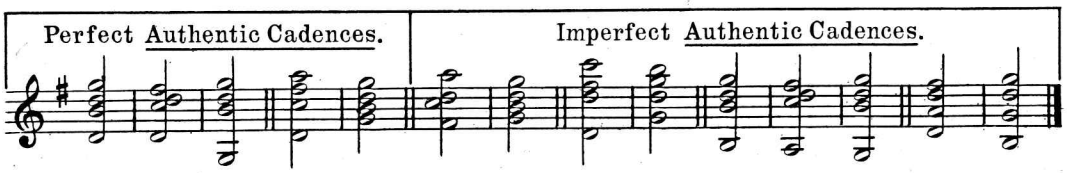


Cadences

A cadence is a more or less definite close of a harmonic progression. These are four important forms.
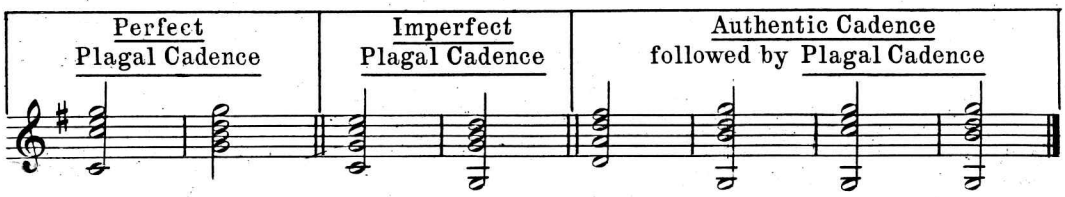
The Authentic Cadence is the best and most decisive. This occurs when the dominant or dominant 7th chord is followed by the tonic; the latter chord must come on the accented part of a measure. The dominant is often preceded by a six-four chord on the tonic. Various forms of the Authentic Cadence are shown here. When the soprano ends on the tonic it is termed a Perfect Authentic Cadence. If the soprano ends on a different note from the tonic, or if either chord is inverted it is an Imperfect Authentic Cadence.

Ex.226



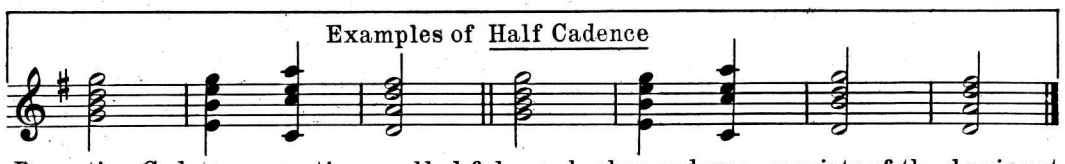
The Plagal Cadence results when subdominant is followed by the tonic. When the soprano ends on the tonic it is a Perfect Plagal Cadence. If the soprano does not end on the tonic, or if either chord is inverted it becomes an Imperfect Plagal Cadence. A good effect may be obtained with the Authentic Cadence followed by the Plagel Cadence, as shown in the last four chords in Ex. 227.

Ex.227



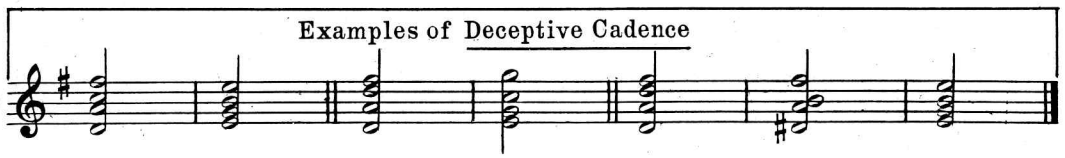
The Half Cadence consists of any chord followed by the dominant.

Ex.228



The Deceptive Cadence - sometimes called false or broken cadence - consists of th dominant followed by any chord except the tonic. It is often employed for a change of key.

Ex.229



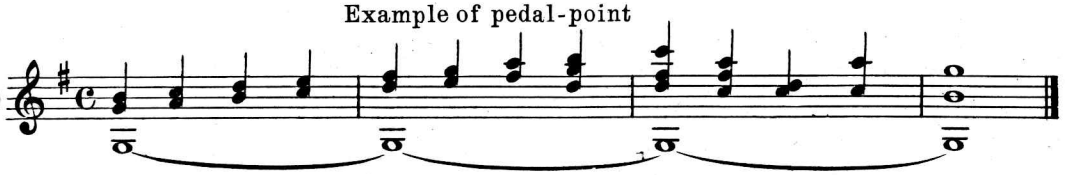
Pedal-Point

A note in the bass may sometimes be sustained through various harmonies, to many of which it does not belong, and when thus employed it is termed Organ-point or Pedal-point. The bass note selected for the pedal-point is generally the tonic or dominant, sometimes both together.

The bass note in pedal-point must belong to the first chord in the passage, to the last chord and to more than half of them all.

Example of pedal-point

Ex.230



Notation and Compass of Fretted Instruments

The term "fretted instrument" means a fingerboard with raised frets suitably placed for securing a perfect chromatic scale on each string. The treble clef is employed in writing for all instruments in this class.

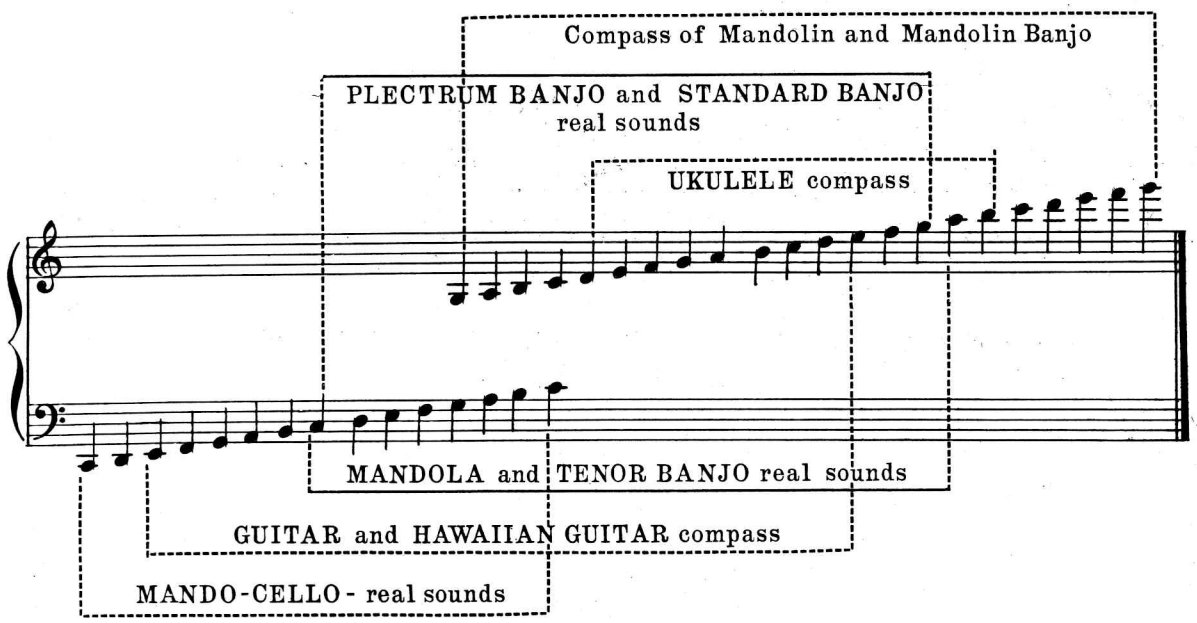
For convenience in grouping and selection of tones they may be divided into three sections:- the MANDOLIN family, the BANJO section and the GUITAR section.

The MANDOLIN group is copied after the regular string quartette, and contains MANDOLIN, MANDOLA and MANDO-CELLO.

The banjo section consists of MANDOLIN BANJO, TENOR BANJO, STANDARD BANJO and PLECTRUM BANJO.

The guitar division has the REGULAR GUITAR, HAWAIIAN GUITAR, PLECTRUM GUITAR and UKULELE.

An outline is given here showing the real sounds and approximate compass of the various instruments.
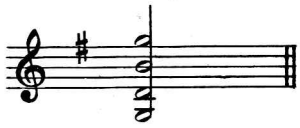


Actual Pitch of Fretted Instruments

Among the various fretted instruments now in use, some produce the actual pitch of the notes shown in the music, while others sound an octave lower than the written notes. In one instrument (the Mando-cello) the tones produced are two octaves below those in the music.
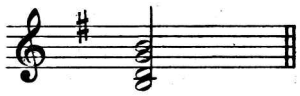
A table of the actual sounds in a G chord coming from each instrument is given here for convenient reference.

MANDOLIN



Notes for the MANDOLIN sound the actual pitch, same as violin or piano.

UKULELE
or Tiple



Notes for UKULELE are actual pitch except those on the fourth string. All notes on the fourth string sound an octave higher than written.

MANDOLA
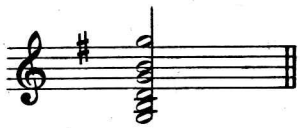


Notes for MANDOLA sound one octave lower than written.

MANDO-CELLO
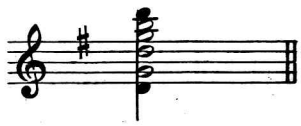


MANDO-CELLO notes sound two octaves lower.

GUITAR



Notes for GUITAR sound one octave lower.

HAWAIIAN GUITAR
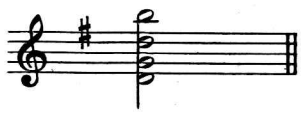


Notes for HAWAIIAN GUITAR sound one octave lower.

MANDOLIN BANJO



Notes for MANDOLIN BANJO are actual pitch.

TENOR BANJO



Notes for TENOR BANJO sound one octave lower.

PLECTRUM BANJO
and
STANDARD BANJO



Notes for PLECTRUM BANJO and STANDARD BANJO sound an octave lower than written.

PART 2

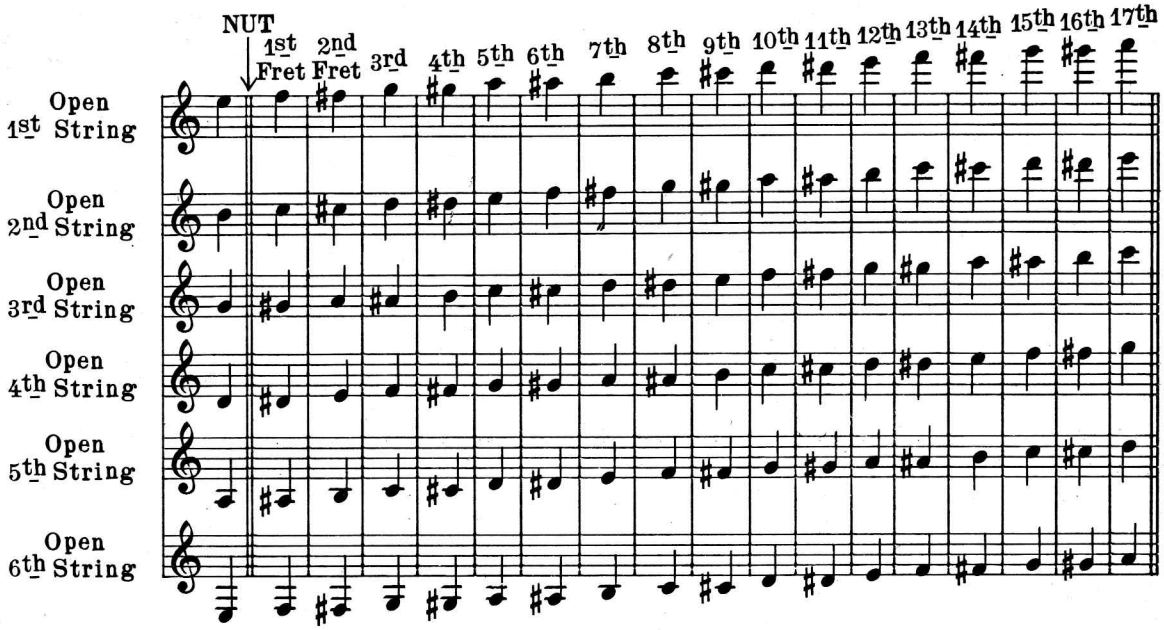
HARMONY FOR GUITAR

WITH PRACTICAL EXAMPLES AND EXERCISES SHOWING HOW TO ARRANGE FROM PIANO SCORES AND HARMONIZE MELODIES.

SIMILAR EXERCISES FOR THE FOLLOWING INSTRUMENTS.

HAWAIIAN GUITAR	GUITAR-UKE
UKULELE	TAROPATCH
TENOR BANJO	BANJO BASS TO D
PLECTRUM BANJO	TIPLE
STANDARD BANJO	MANDO BASS
MANDOLIN	PLECTRUM ORCHESTRA

Guitar Fingerboard Chart

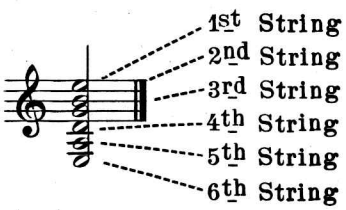


HARMONIC BEAUTY OF THE GUITAR

Of all the fretted instruments now in use, the Spanish Guitar, known as the Regular Guitar, is the most effective, pliant and manageable for securing correct harmonic progres - sion. The lower strings being tuned in fourths (like the double bass Violin) the proper inversions are nearly always available; while the upper strings being tuned to the E minor chord, makes possible an easy distribution of chords with the melody note on top.

The prevailing character of chords for Guitar is close harmony, although the choice of open or close harmony will be found practical and often interchangeable. As these chords really sound one octave lower than written, their actual pitch for the accompaning harmonies, generally corresponds to the middle register of the piano.

The six strings of the Guitar are tuned and written for as shown here, but sound one oc - tave lower, therefore the low E sounds the same as E on first added line below in the bass clef.



Before attempting to arrange for guitar, it is absolutely necessary to have some knowledge of the instrument's peculiar and varied technical features, particularly in the use of the Small Bar and the Great Bar. This knowledge being presupposed no further reference will be made regarding fingering except where unavoidable.

Owing to its well conceived method of tuning, the guitar may be employed for either melodic or harmonic passages in the orchestra, and when used alone as a solo instrument, the melody and harmony can be happily combined in a very beautiful manner. The general plan adopted in this book will first treat the guitar as a harmonic instrument for chords and accompaniments, followed by its employment in solos.

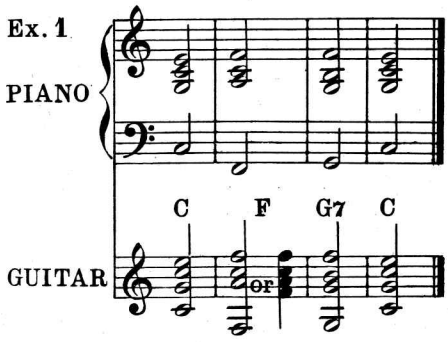
Bass And Chords For Guitar

A natural and convenient distribution of bass notes and chords becomes apparent, when the three lower strings of guitar are reserved for the bass, and the three upper strings for chords. This rule, however, is not arbitrary, for the two parts may encroach, one upon the other, as occasion demands

The essential acquirement is to write a chord that fits the guitar fingerboard -- in other words the chord must be playable. If it lacks that feature the fault may be more irritating than a wrong progression.

Chords for guitar look different from piano chords on account of a change in the octave. The tonic, subdominant and dominant 7th chords in C major are shown here for piano, and the same chords adapted for guitar by writing them an octave higher.

The very low F in the second chord for guitar, can be obtained, but when too difficult this F may be written an octave higher.



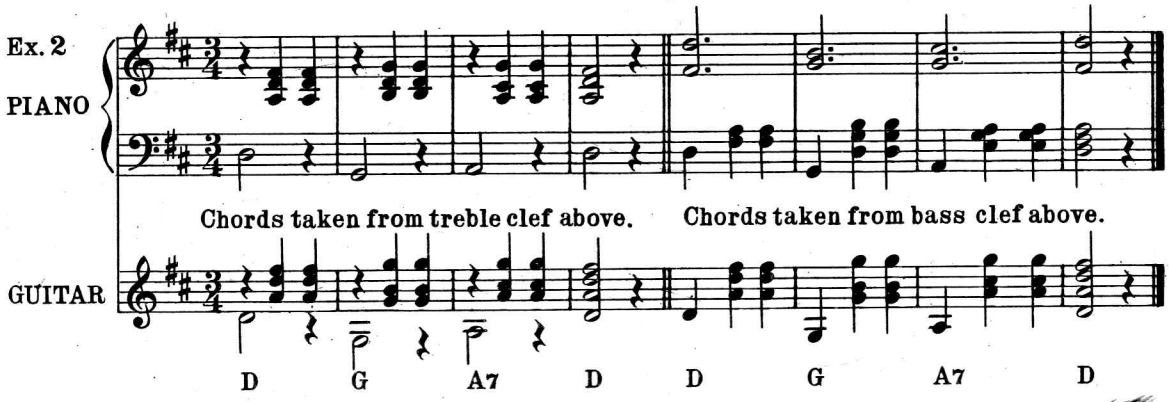
The best method for gaining facility in writing guitar chords, is to begin with an easy orchestra score published for piano, and adapt the same for guitar. This can be quickly mastered if the following rules are observed:-

1. Select a composition written in a key which is easy for guitar. (Transposition of keys may be tried later.)
2. Write the signature of the key and the proper time marks, on one staff with treble clef.
3. Observe the first bass note in the printed copy. As this note will be in the bass clef it must be brought into the treble clef for guitar. A recognition of the note and its transference to a low string for guitar is a simple operation. If the bass note is D, simply write D for guitar in the treble clef--the low D below first line of staff.
4. The chord which follows must be recognized and named before attempting to write in your copy. If this chord is D for piano, a mental picture of the D chord for guitar will come naturally. Compare this with the piano chord and see if the intervals are placed like the piano score. If these intervals, as shown in the printed copy, are not practical for guitar, ignore them and write the chord so that it fits the guitar.

When a piano chord is placed so that the intervals are not practical for guitar, the chord may be inverted to bring these intervals within range of the guitarist's fingers. Very often a piano chord written in open harmony, must be inverted to close harmony for guitar. Then again, close harmony for piano is occasionally changed to open harmony for guitar, as shown in the G chord, Example 2. This G chord as written for piano is possible on guitar, but for convenient manipulation the fifth may be omitted.
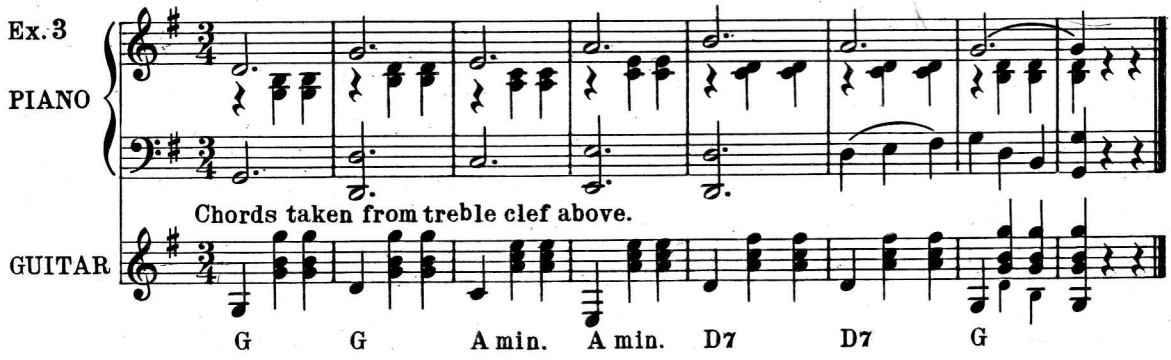
In adapting piano chords for guitar the chief point is the ability to recognize and name the piano chord at sight, before transfering the notes to guitar. When both bass and chord are in the bass clef for piano, the task becomes more difficult, but with a little practice it can soon be mastered.

Copy the following guitar part in the key of D, and compare each chord, as you write it, with the piano score.
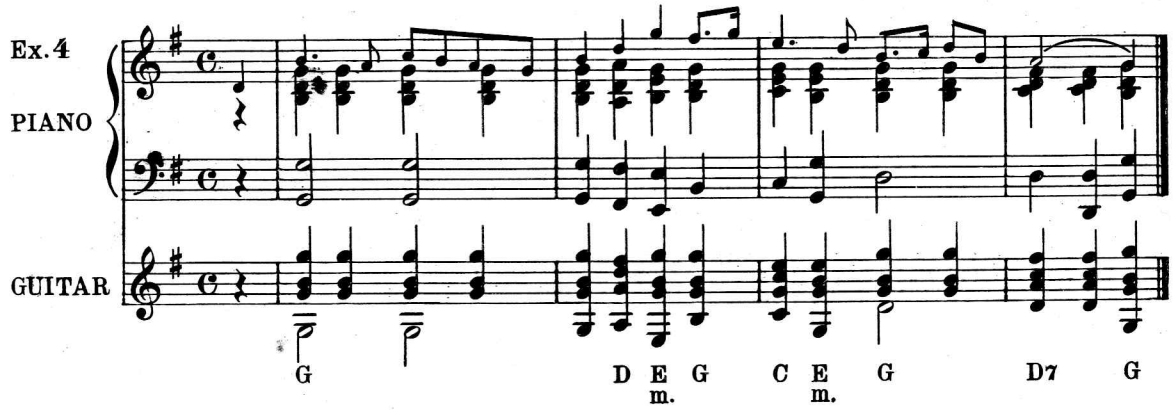


Sometimes the natural movement of the bass cannot be followed, owing to the guitar's restricted compass. The low D which follows G bass here in the piano part, must be taken higher than G, on guitar.
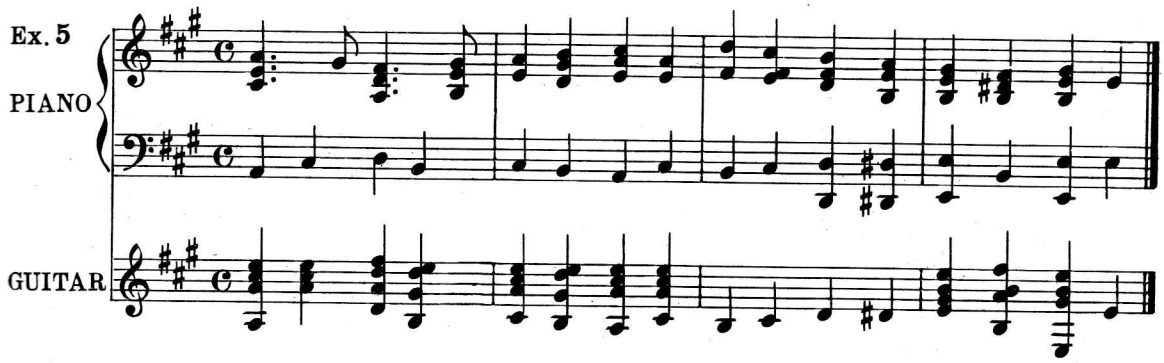
Write all of these guitar scores on blank music paper.
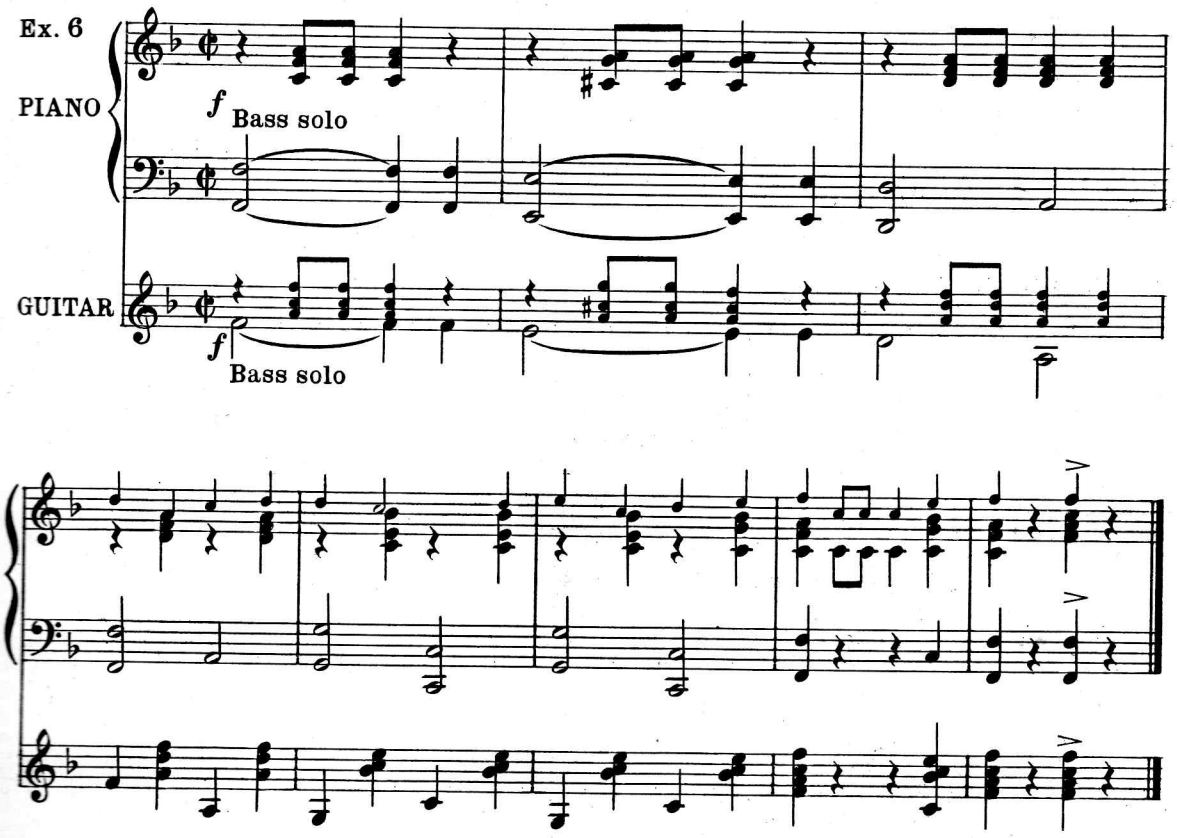


When a bass note is rather difficult to reach, or when it would produce consecutive octaves with the high note in a guitar chord, another bass for that chord may be used when coming on an unaccented part of the measure. See A bass in the following.



When the bass has a strong contrary motion with the melody, it may be written for guitar without the chords, as shown in the third measure of the following phrase.



Bass solos are very effective on guitar, the three lower strings being generally used for that purpose. The chords which accompany a bass melody should be written in small notes, indicating that such chords may be played ad libitum. Care should be taken to make these chords playable.



Transposition Of Keys

It is often desirable to change the key when a composition runs too high or low for the vocal range. If the piano accompaniment, for example, is in the key of B-flat, and the guitarist wishes to sing in G, the accompaniment for guitar must be written in G; in other words it must be transposed.

A detailed explanation of transposition will be found in Part 1, Chapter I.

In transposing a guitar accompaniment from a piano score, the first thing is to write the proper signature for the new key. The next point is to find how much higher or lower this new key is from the old one. If the piano key is B-flat and you want the guitar to be in G, we find that G is a minor third lower than B-flat. This interval, a minor third, becomes an infallible guide in writing the guitar chords-- for if the piano chord is B-flat, the guitar chord must be G, a minor third lower than B-flat. In the same way all other chords in the piano part, must be placed a minor third lower for guitar. The F chord for piano becomes a D chord for guitar, the E-flat chord on piano must be a C chord for guitar, while a G-minor becomes E-minor.

It will thus be seen that the entire process of transposing an accompaniment, hinges on the quick recognition of a chord in the old key and the altering of that chord to fit the new. If this method is followed there will be no necessity of tediously picking out individual notes of a chord, one at a time, and laborously joining them together in their new home. Think of the chord at once, as a complete chord, and the individual notes can be assembled quite readily to fit the guitar fingerboard. If the studies and exercises in Part 1 of this treatise, have been carefully worked out, the immediate recognition of a chord becomes very simple.

Another point to remember is that in every transposition the tonic, subdominant, dominant and other chords, belonging to the old key, must be adjusted so that they conform to the corresponding chords in the new.

A reference table is given showing the various chords in important keys, and the corresponding chord of each key, either above or below the one selected.

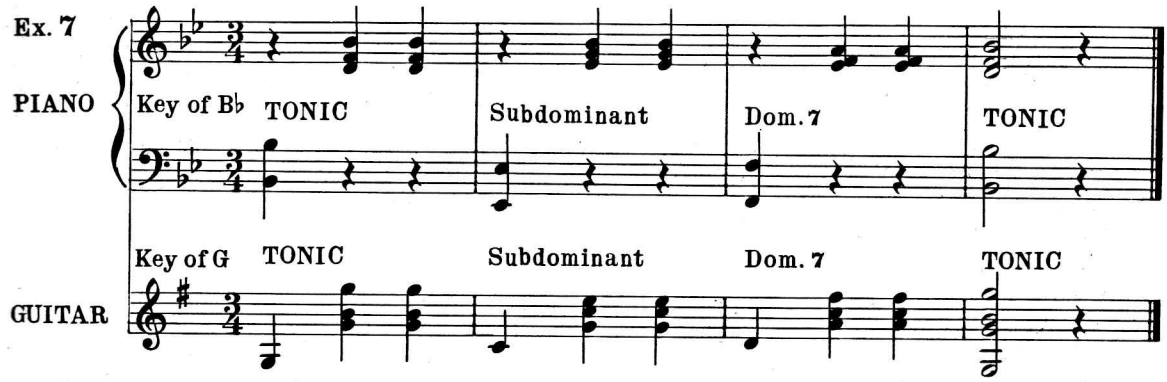
Reference Table
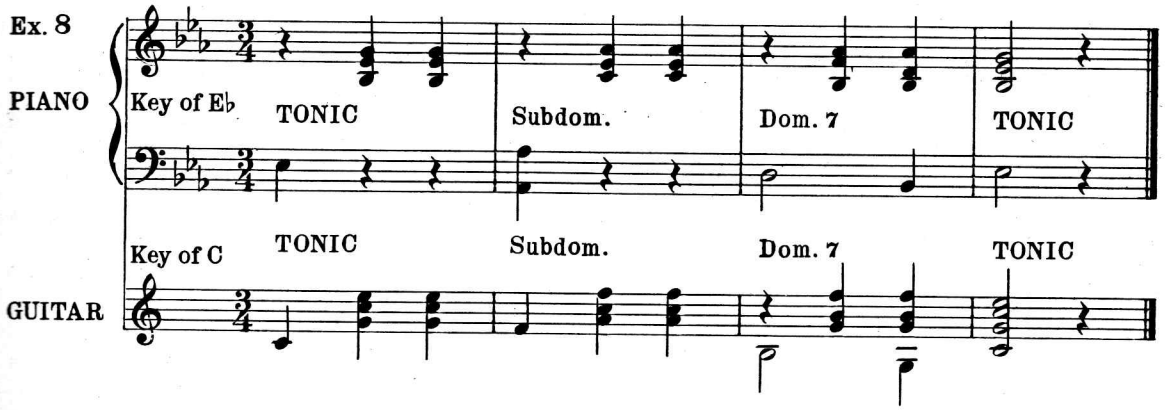
Names of important chords with the corresponding chords in various keys.
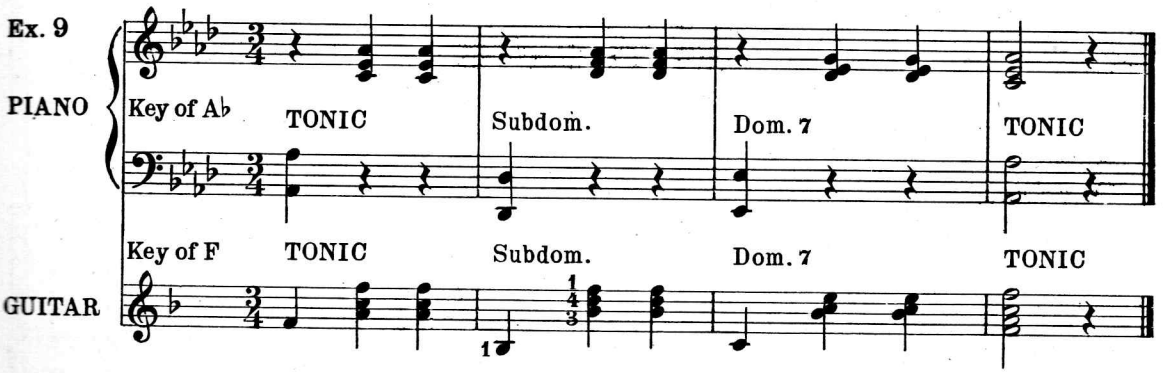
	MAJOR CHORDS			MINOR CHORDS			ALLIED CHORDS		
Chords in C -	C	F	G 7th	A min	D min	E min	C 7th	D 7th	A 7th
" " D♭ -	D♭	G♭	A♭ 7th	B♭ min	E♭ min	F min	D♭ 7th	E♭ 7th	B♭ 7th
" " D -	D	G	A 7th	B min	E min	F♯ min	D 7th	E 7th	B 7th
" " E♭ -	E♭	A♭	B♭ 7th	C min	F min	G min	E♭ 7th	F 7th	C 7th
" " E -	E	A	B 7th	C♯ Min	F♯ min	G♯ min	E 7th	F♯ 7th	C♯ 7th
" " F -	F	B♭	C 7th	D min	G min	A min	F 7th	G 7th	D 7th
" " G♭ -	G♭	C♭	D♭ 7th	E♭ min	A♭ min	B♭ min	G♭ 7th	A♭ 7th	E♭ 7th
" " G -	G	C	D 7th	E min	A min	B min	G 7th	A 7th	E 7th
" " A♭ -	A♭	D♭	E♭ 7th	F min	B♭ min	C min	A♭ 7th	B♭ 7th	F 7th
" " A -	A	D	E 7th	F♯ min	B min	C♯ min	A 7th	B 7th	F♯ 7th
" " B♭ -	B♭	E♭	F 7th	G min	C min	D min	B♭ 7th	C 7th	G 7th
" " B -	B	E	F♯ 7th	G♯ min	C♯ min	D♯ min	B 7th	C♯ 7th	G♯ 7th

In conjunction with instant recognition of any chord to be transposed, it is a tremendous advantage to know and be conscious of the chord's importance in the old key, so that when transposed into the new key its value is the same. If the chord is the tonic it must be, when transposed, the tonic of the new key, if the dominant 7th, it must be dominant 7th in the new key, and so on.

Write the following guitar chords and observe how their relative importance, when transposed from piano, remains the same.
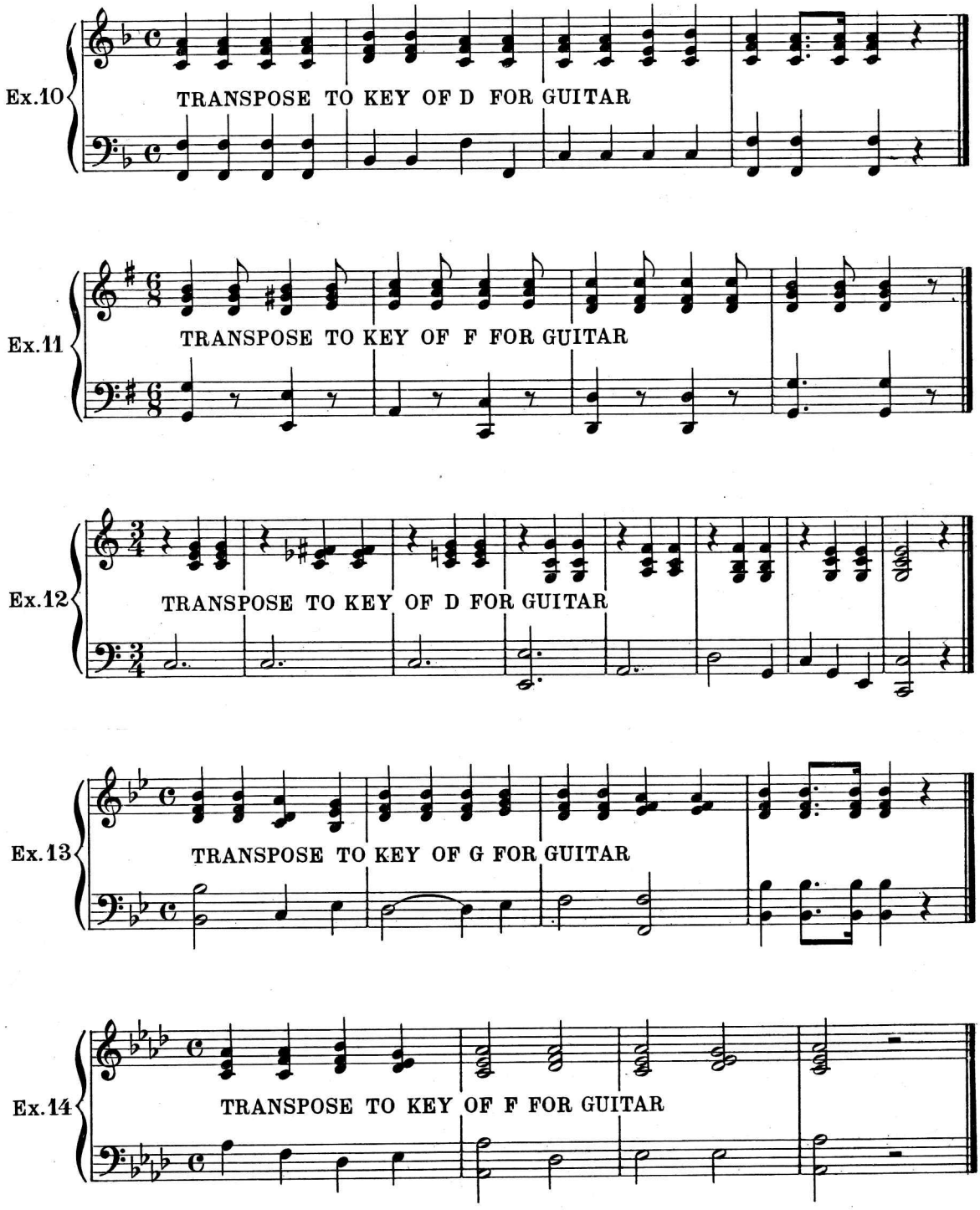






Exercises

The following piano accompaniments are to be arranged for guitar, transposing them into keys as marked.



Harmonizing Melodies

The preceding guitar accompaniments were comparatively easy to write, on account of their being merely a transposition from a piano score to chords for guitar. When a melody alone is given, for which the necessary chords are to be supplied, it becomes a more difficult task, because these chords must harmonize the melody. Chords may be formed on any degree of the scale, the relative importance of each chord being as follows:-

1- The tonic triad is much used in every position, and always terminates the accompaniment.

2- The chord on the second degree is frequently used.

3- The chord on the third degree is employed rarely.

4- The subdominant triad is used in any form.

5- The dominant or dominant 7th is much used.

6- The chord on the sixth degree is frequently used, and generally has its root in the bass.

7- The leading-tone triad seldom occurs except with its third in the bass.

Very often a melody can be harmonized several different ways, each form presenting a new turn in the harmonic progression which imparts a different background for the melody. The waltz melody shown here is harmonized several ways, any one of them, taken alone, would be acceptable.

Ex. 15

MELODY to be harmonized.
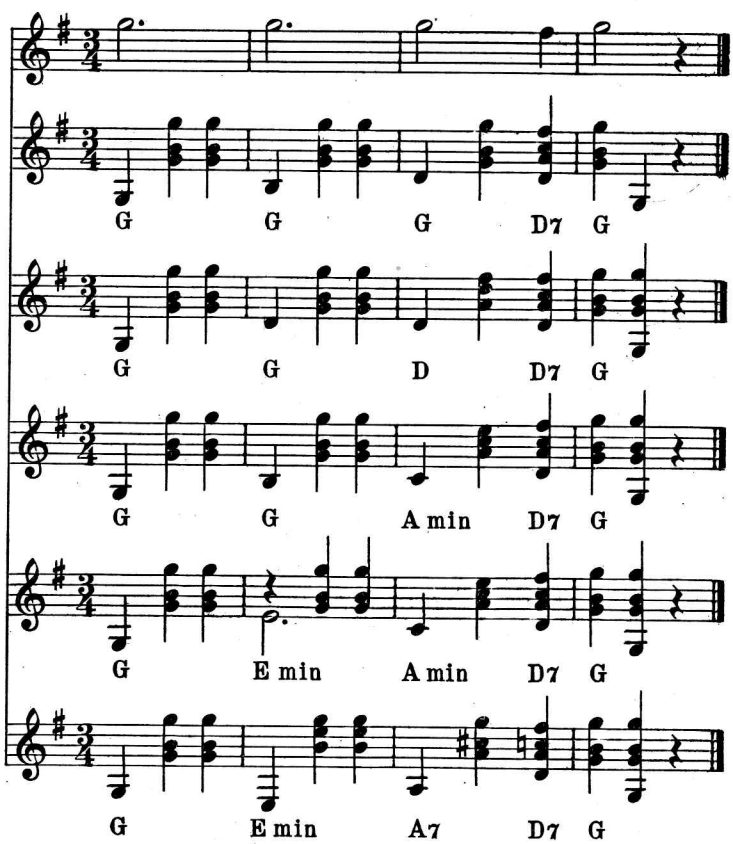
GUITAR ACCOMPANIMENT.
First form using the tonic and dominant 7th chords.

Second form, The high G in third measure of the melody is a suspension.

Third form- introducing the A minor chord in third measure.

Fourth form- introducing the E minor chord in second measure.

Fifth form- introducing the A dominant 7th chord in third measure.

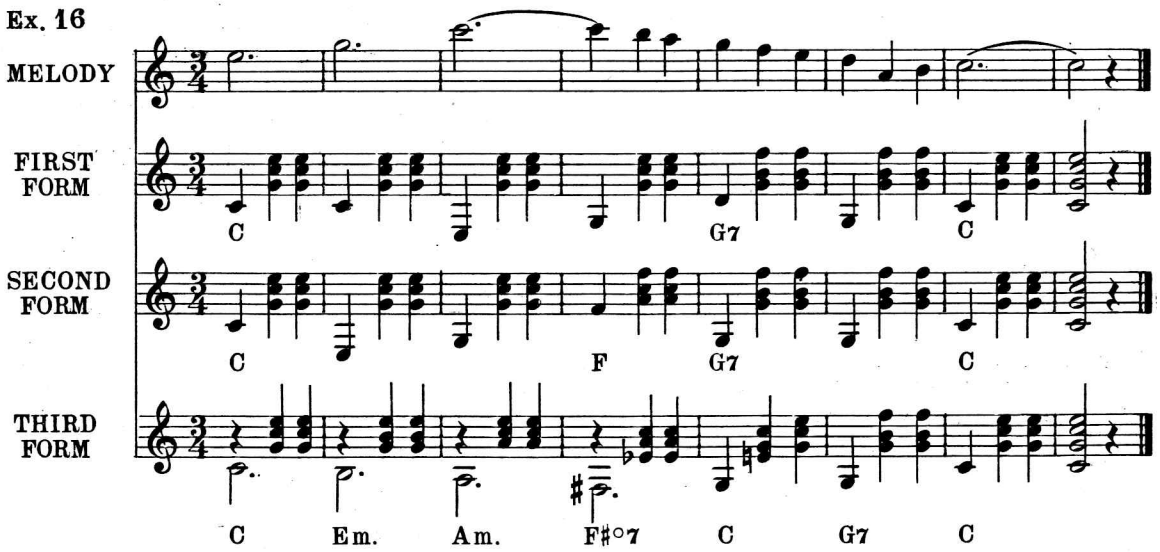


Copy the above on blank music paper and then transpose to the key of F.

Guitar performers in the orchestra usually mark a piano part with letters designating the name of each chord. This plan will be used here in order to assist reading. The F# diminished 7th chord shown in the following is marked F♯°7. The E♭ in this chord is placed to secure a convenient rendition on the guitar.
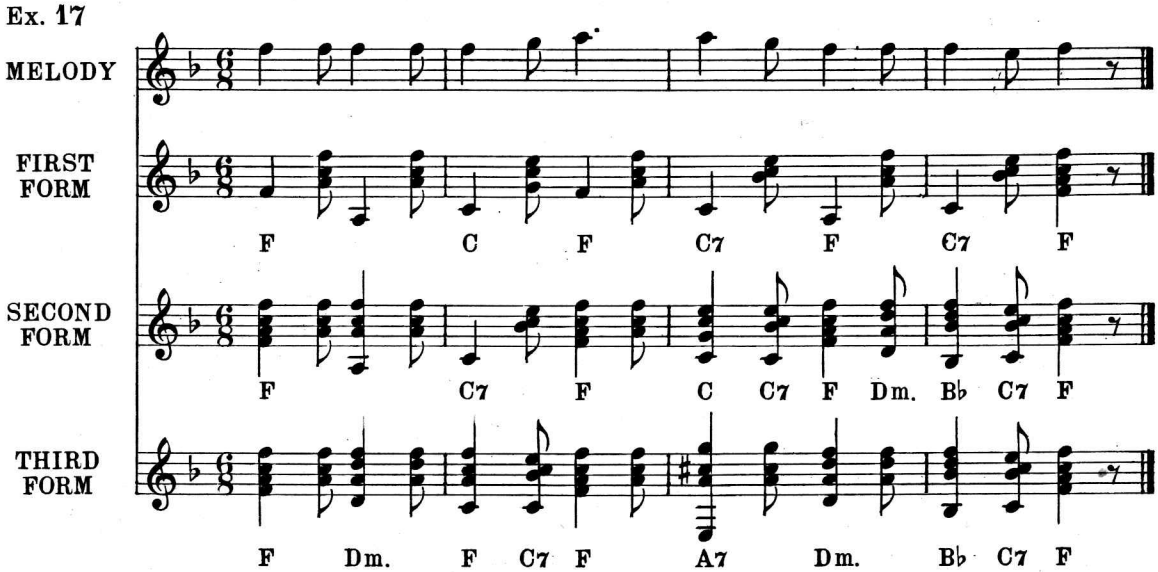
Copy the following as written and then transpose to the key of D.

Ex. 16



The following melody in march time could be harmonized in a great many more ways than shown here. Several copies of this should be written in F, and then transposed to G, changing the harmony after a correct copy is written and played over.

Ex. 17
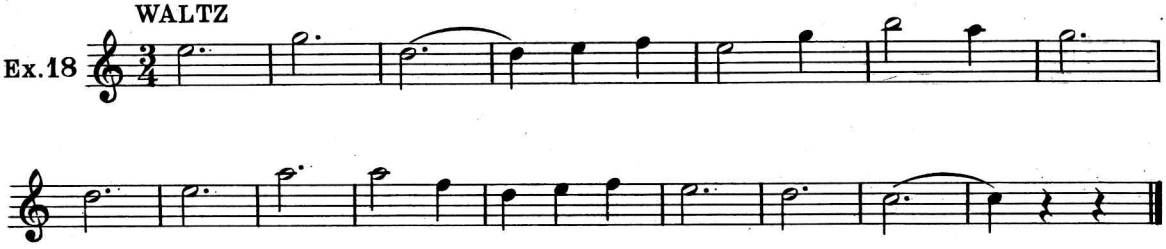


Exercises

Write a guitar accompaniment for each of the following melodies.
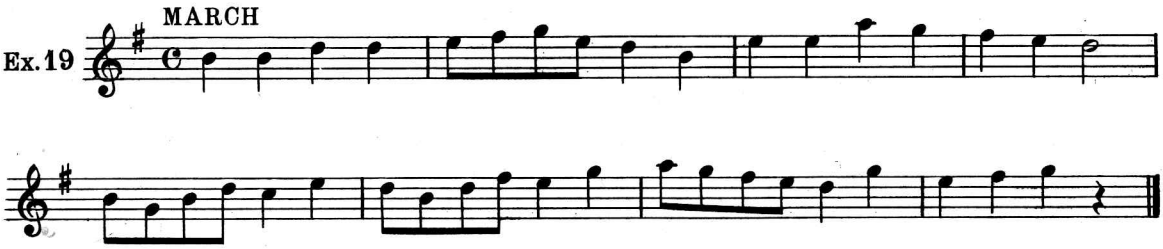
WALTZ

Ex.18
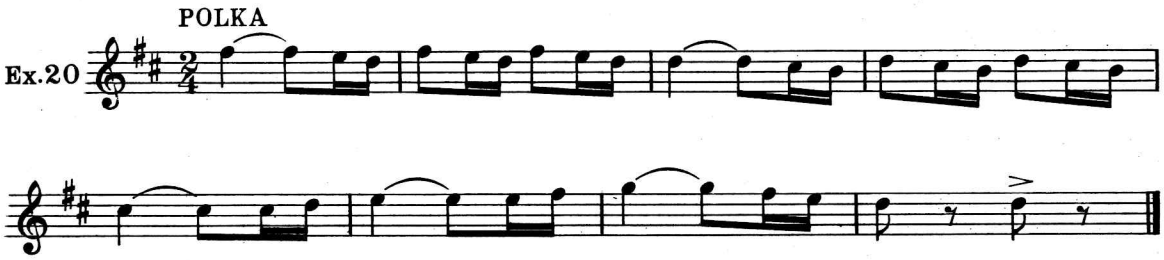


MARCH

Ex.19
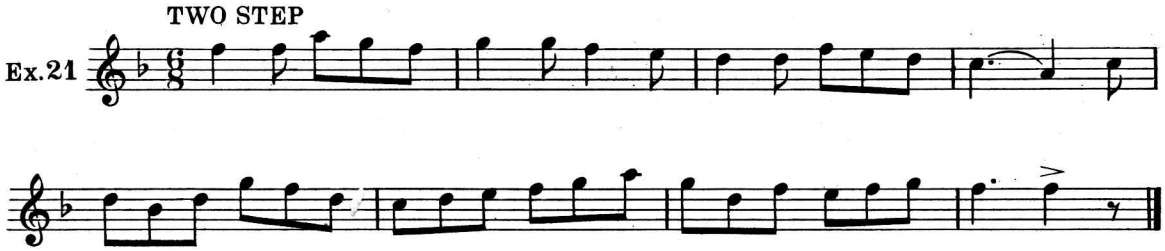


POLKA

Ex.20
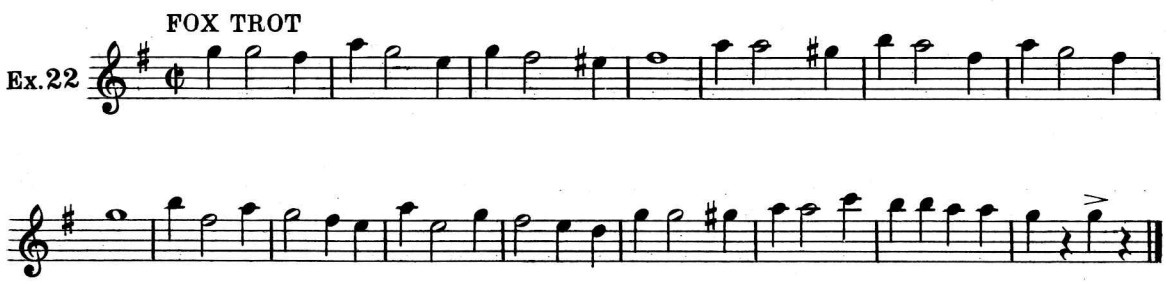


TWO STEP

Ex.21



FOX TROT

Ex.22
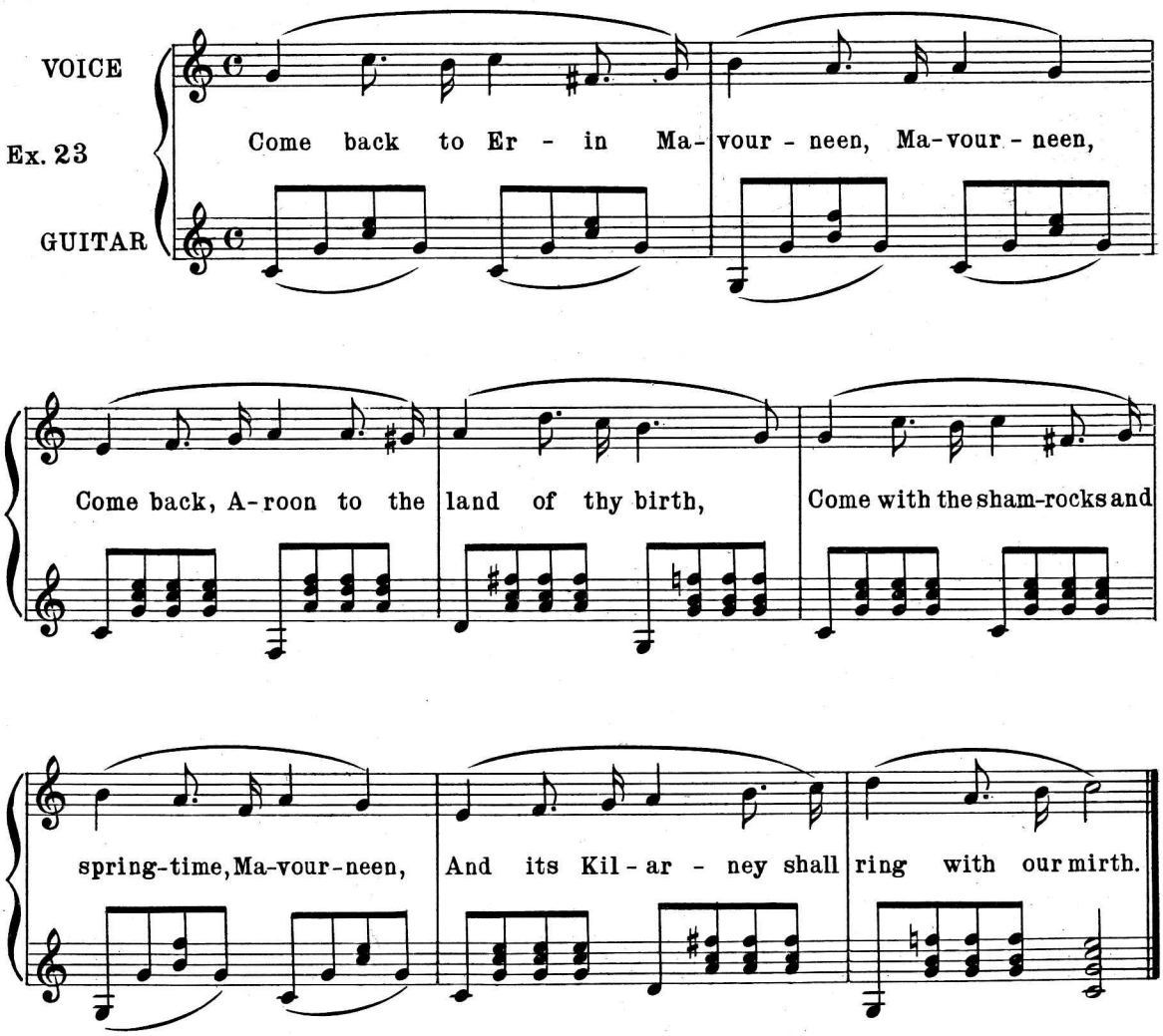


Guitar And Voice

For playing accompaniments to vocal solos, the guitar imparts a charm to the harmonies unequaled by any other instrument. There seems to be a perfect blending of tones between the plaintive sounds from the strings and the human voice.

Ordinary chords are the most effective for songs, the notes of these chords being generally placed in the first position, and written as either full chords or arpeggio.

Come Back To Erin
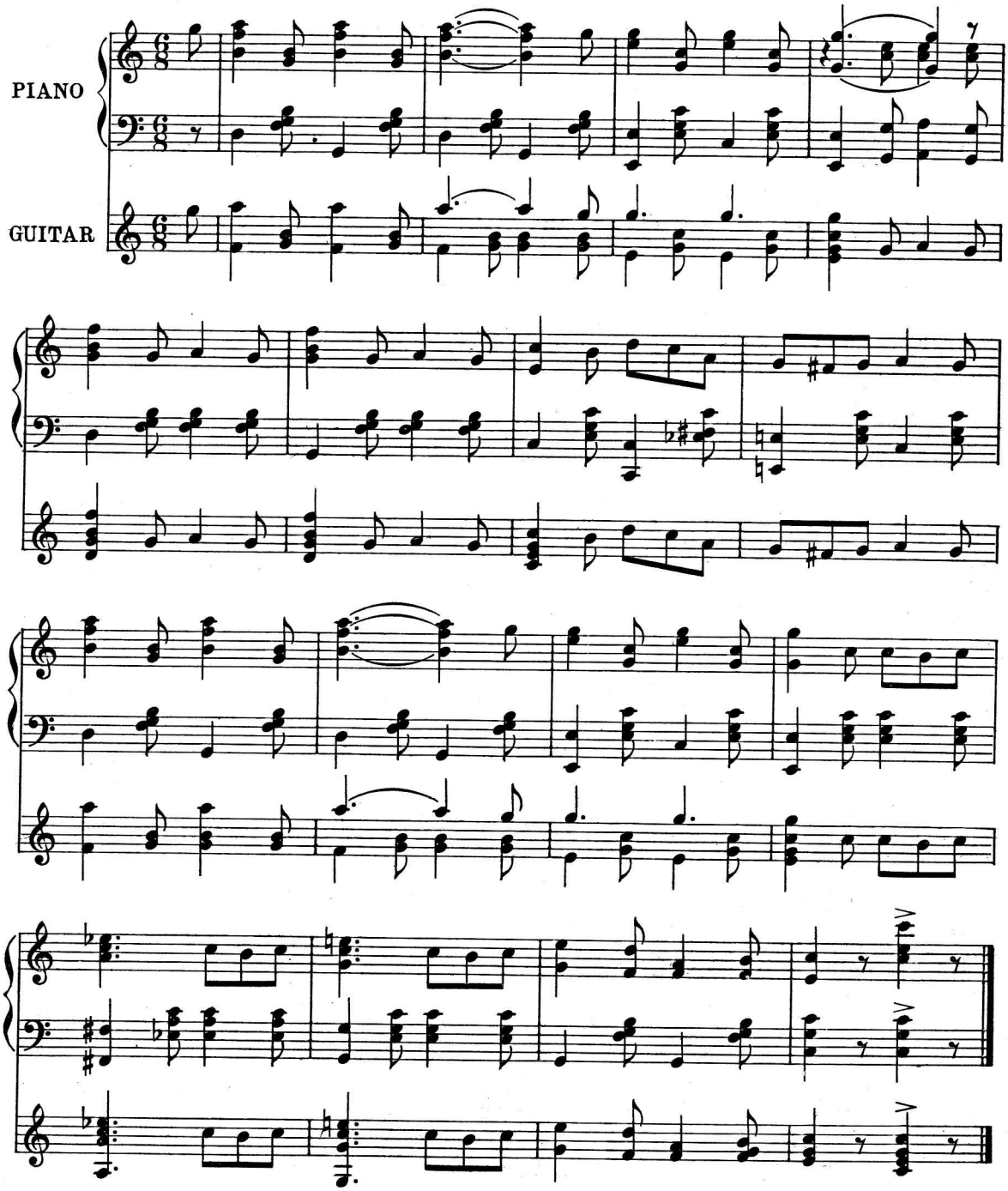
CLARIBEL



In arranging a guitar solo from a piano selection, the main thought should be to bring out the melody distinctly by placing the theme on the upper strings, thus leaving the lower strings for the necessary harmonies. The rhythm of the composition should be borne in mind when selecting chords for these harmonies. As these chords are usually in bass clef for piano, their transference to treble clef for guitar is a very simple operation.

Copy the following guitar solo and observe how the "after beats" agree with the left hand accompaniment for piano.
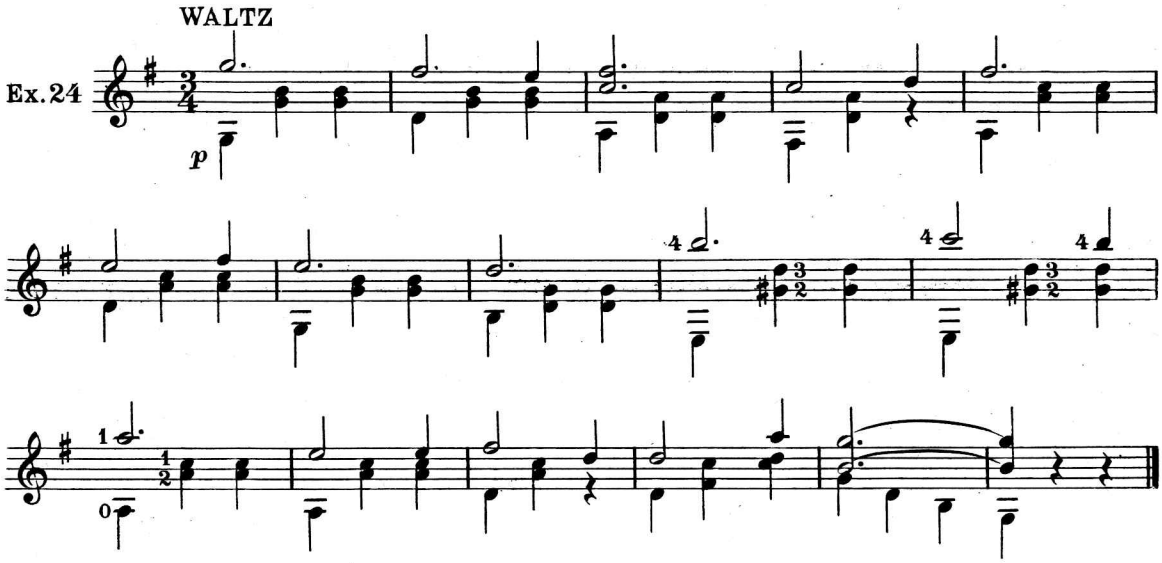
Paola March



Guitar Solos

Instrumental solos for guitar combine the principal melody with chords in the form of an accompaniment. A great variety of effects is possible in writing the melody, among which the tremolo, with one, two or three fingers sustain the melody, along with the necessary notes for the harmony which are generally played by the thumb. The notes containing the melody should have their stems run up, while the notes for the harmony have their stems point down.
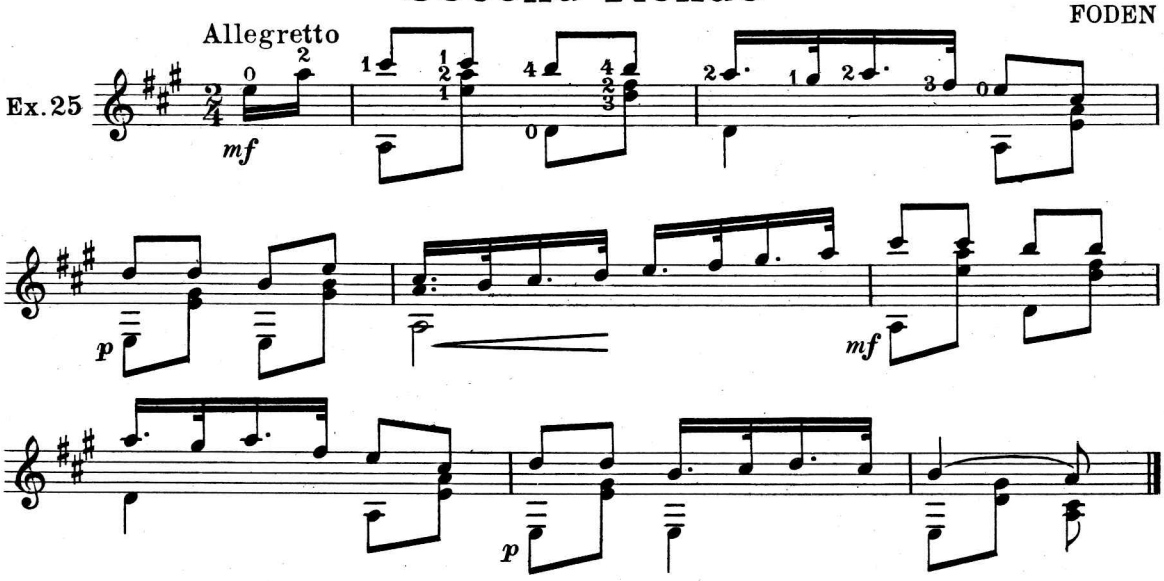
In the following waltz the melody notes are sufficiently prolonged without the tremolo, and the accompaniment is played with the usual fingers.



A selection in the key of A, showing another style of accompaniment.

Second Rondo

FODEN

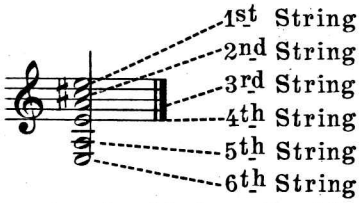


HARMONY FOR HAWAIIAN GUITAR

The prevailing mode for Hawaiian Guitar, is major chords throughout its entire fingerboard. Left hand fingering being attained by the "steel," which crosses the strings at any place, the resultant harmony is consonant, thereby producing a gay and cheerful effect so much admired in this instrument.

The six strings of Hawaiian Guitar are tuned to the chord of A major, as shown here. The lowest string E, being the fifth of that chord, it should be omitted in a final chord, in order to avoid ending on a six-four chord.
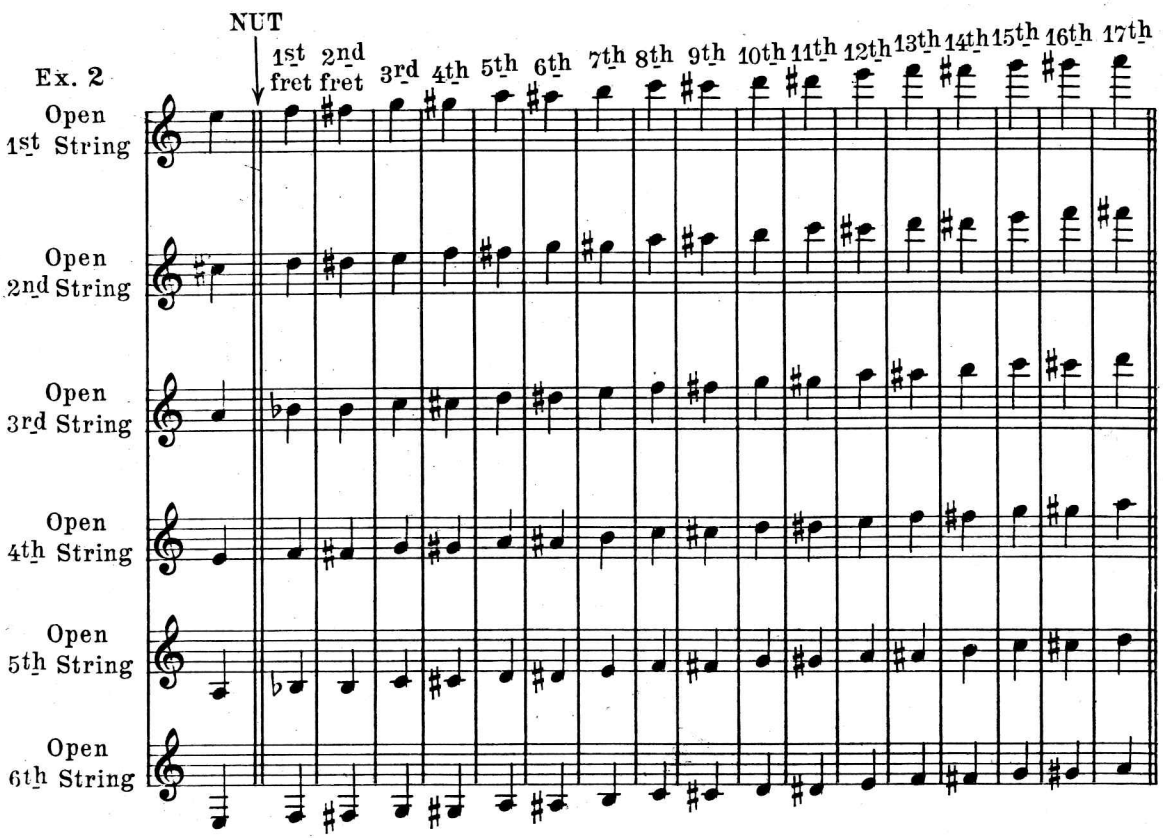
Ex. 1



When the steel is placed across all strings at any given fret, a major chord is formed, and the root of that chord is always on the fifth string.

A complete chart of the Hawaiian Guitar fingerboard is given below.

Ex. 2



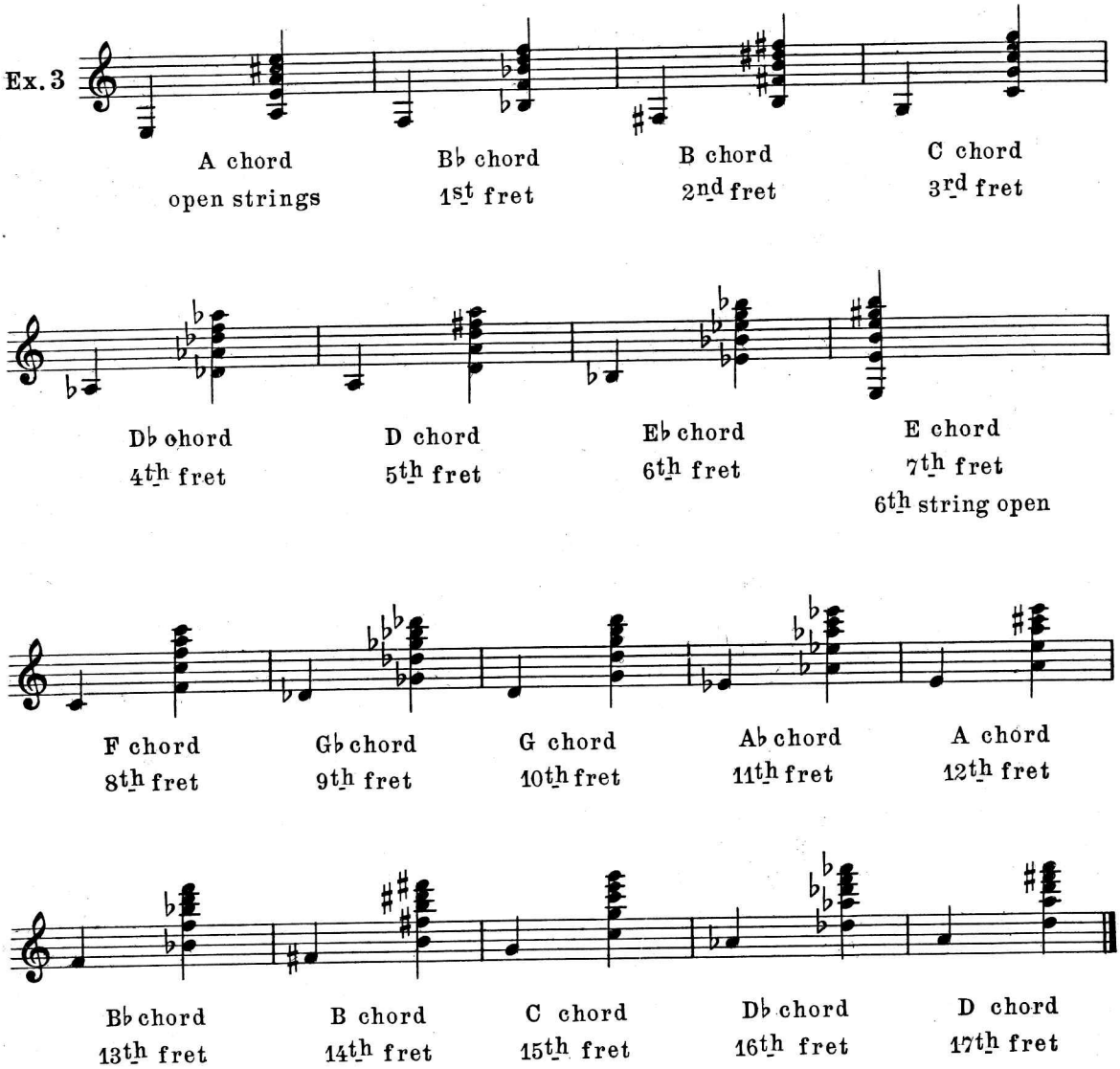
It will be almost impossible to write even an accompaniment for Hawaiian Guitar, without some knowledge of the fingerboard and the manipulation of the steel. The instrument's attractive tuning creates a temptation to select chords which demand rapid changes in placing the steel, and the consequent difficulty of execution. For this reason the above chart should be studied before attempting to write.

All notes on Hawaiian guitar sound one octave lower than written.

General Plan of Chords

All the major chords given below are easily obtained, even those higher than the 12th fret being useful and practical. Open harmony is possible by omitting certain notes of a chord, and any cluster of two or more notes may be used.
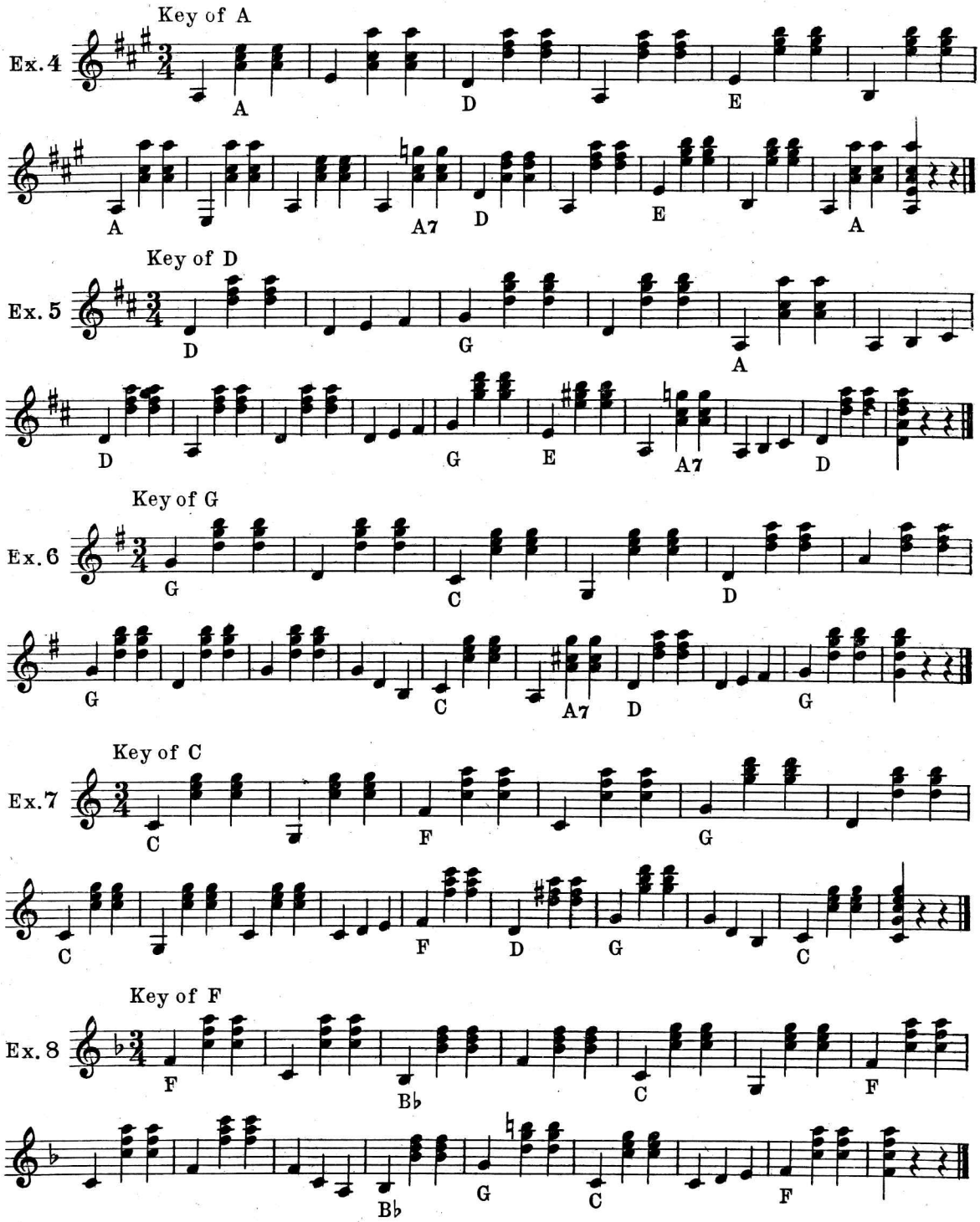
The low note preseding each chord is valuable where an inversion of the bass becomes necessary. The E major chord can also be written with fifth in the bass, but it is shown here with its root for the bass.



The primary chords of each major key can be obtained by merely changing the position of the steel. If the key employed is A major, the tonic chord is the open strings, requiring no use of the steel. Then the subdominant sounds when the steel is placed at 5th fret, and the dominant is obtained at the 7th fret.

As the steel can be tilted or held at any angle, so that only one or two strings form a contact, it is possible to obtain some beautiful chords. The high A, for example, may be given along with open strings of the A major, and the G may be written as a minor 7th at the 3rd fret to secure the A dominant 7th chord.
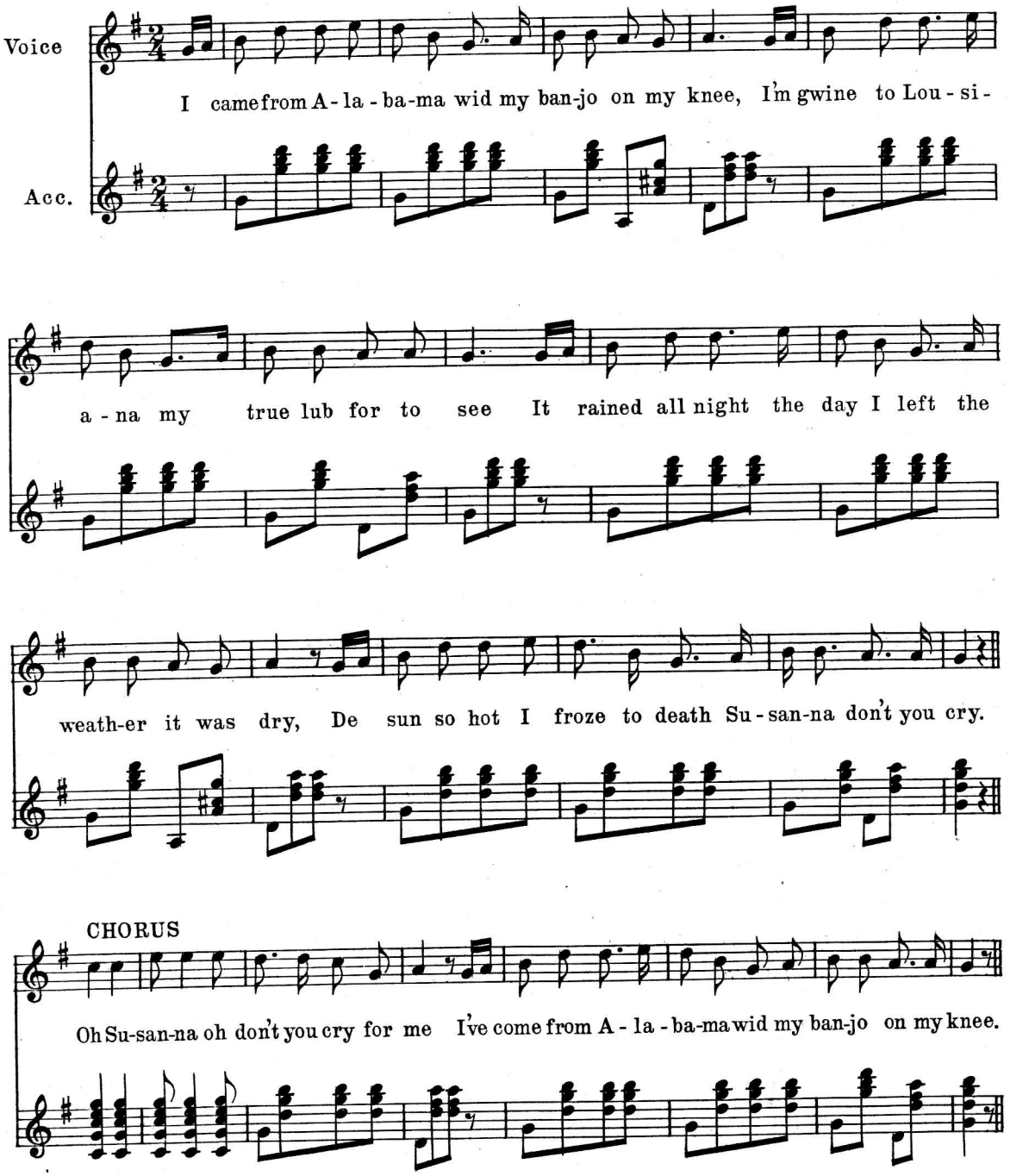
Chord Models



From the preceding examples it will be observed that chord progressions, on the Hawaiian guitar, must be adjusted to fit the peculiar technic of the fingerboard.
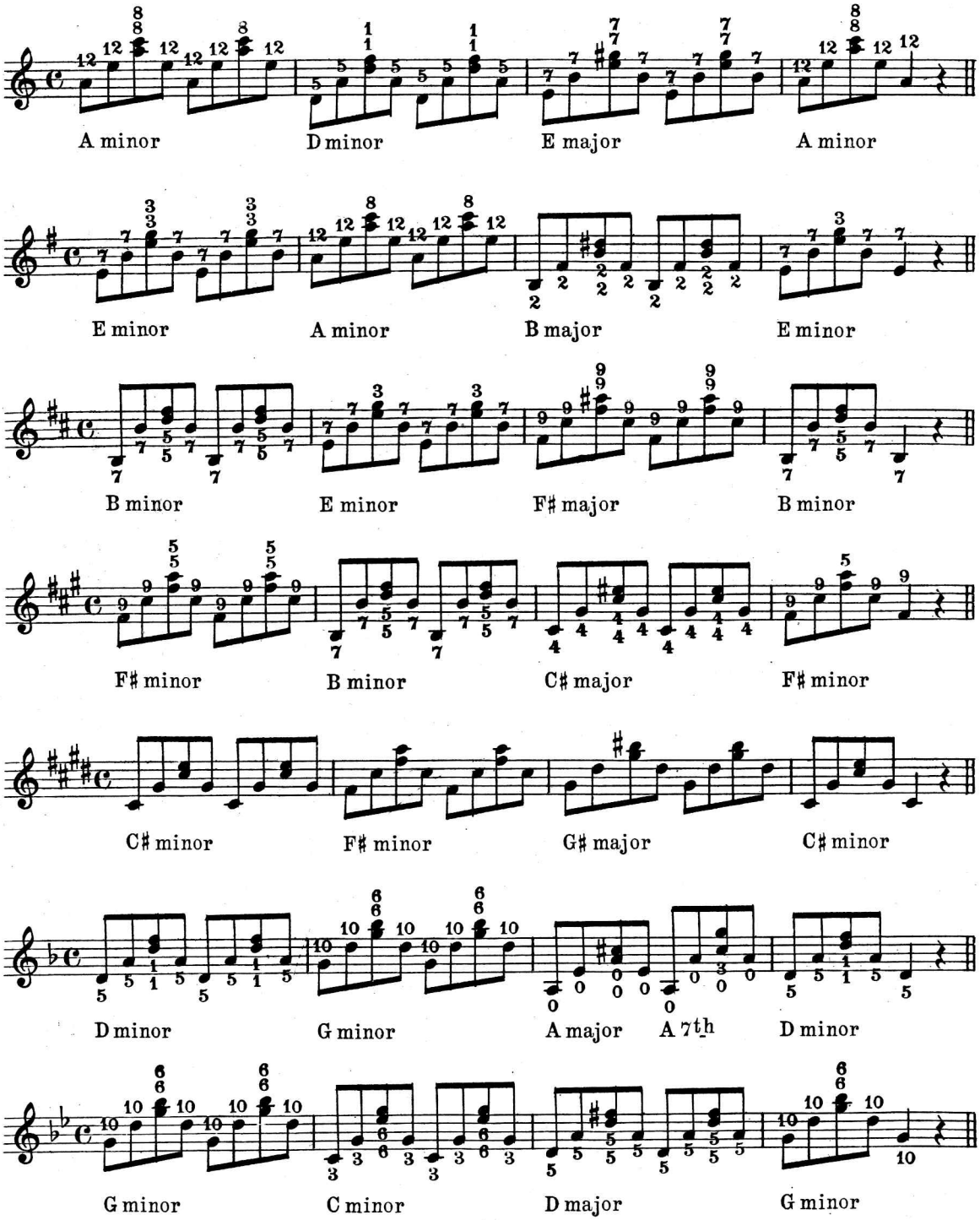
As an accompaniment for vocal solos, these chords are effective, because their low register brings them below the singer's voice.

Oh! Susanna



Minor Chords

On the Hawaiian guitar minor chords are more difficult, because the strings are tuned in the major mode, and manipulation of the steel, for securing such chords, requires considerable skill. All minor chords must be played as "broken," and are playable only in moderate tempo, so that the steel can be easily managed.



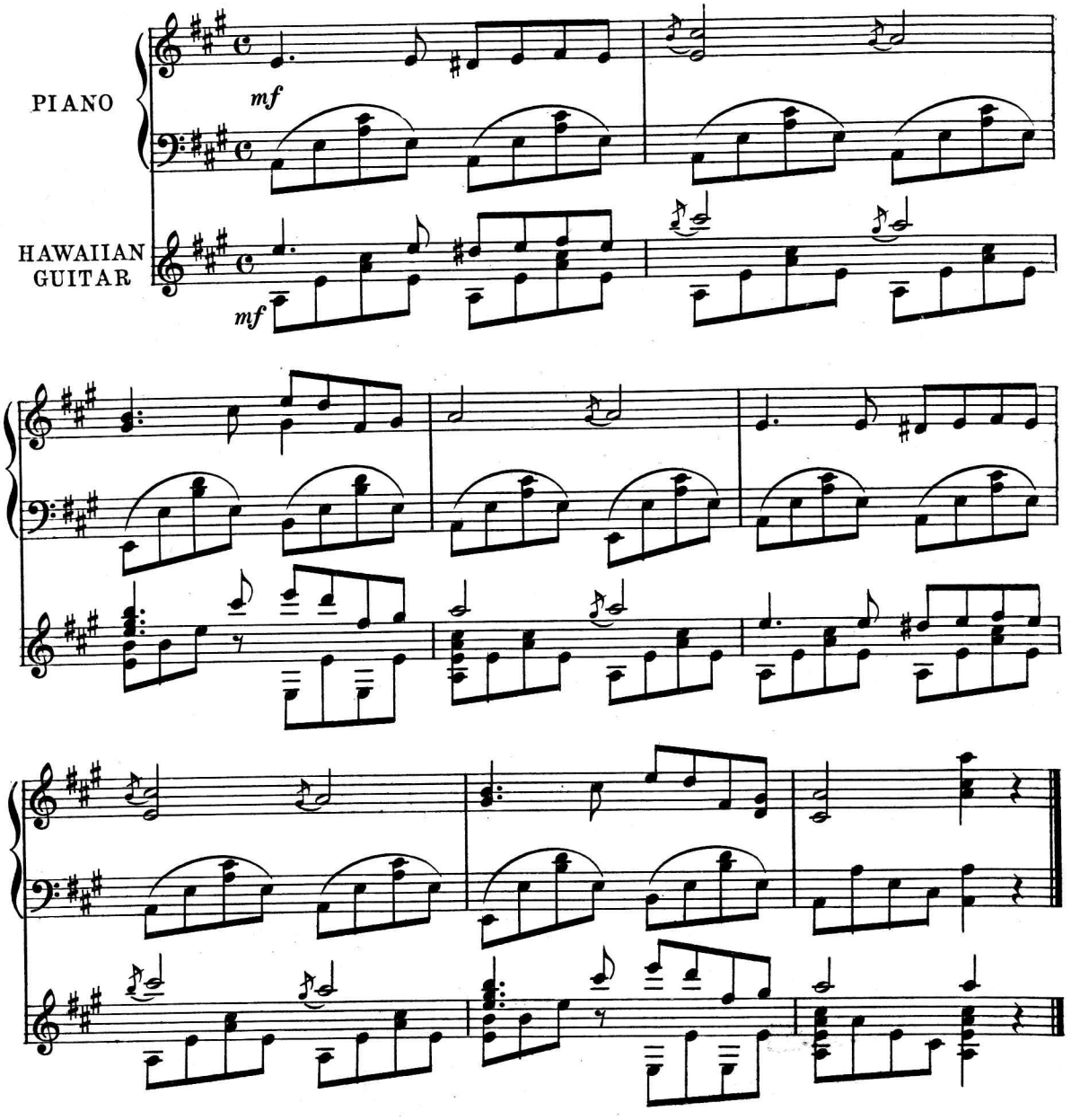
Arranging Solos from Piano Music

In adapting piano solos for Hawaiian guitar, the melody notes should be written first. These notes are generally better if placed an octave higher than those on piano. After these come the chords found in the bass clef for piano, which must be changed to treble chords for Hawaiian guitar. If Part 1 of this book has been studied the change from bass to treble is quite easy.

In some instances it will be found impossible to secure all the notes required for a complete chord, and when this happens omit them, so that the melody can be played with ease and clearness.

Wai Lanamalie
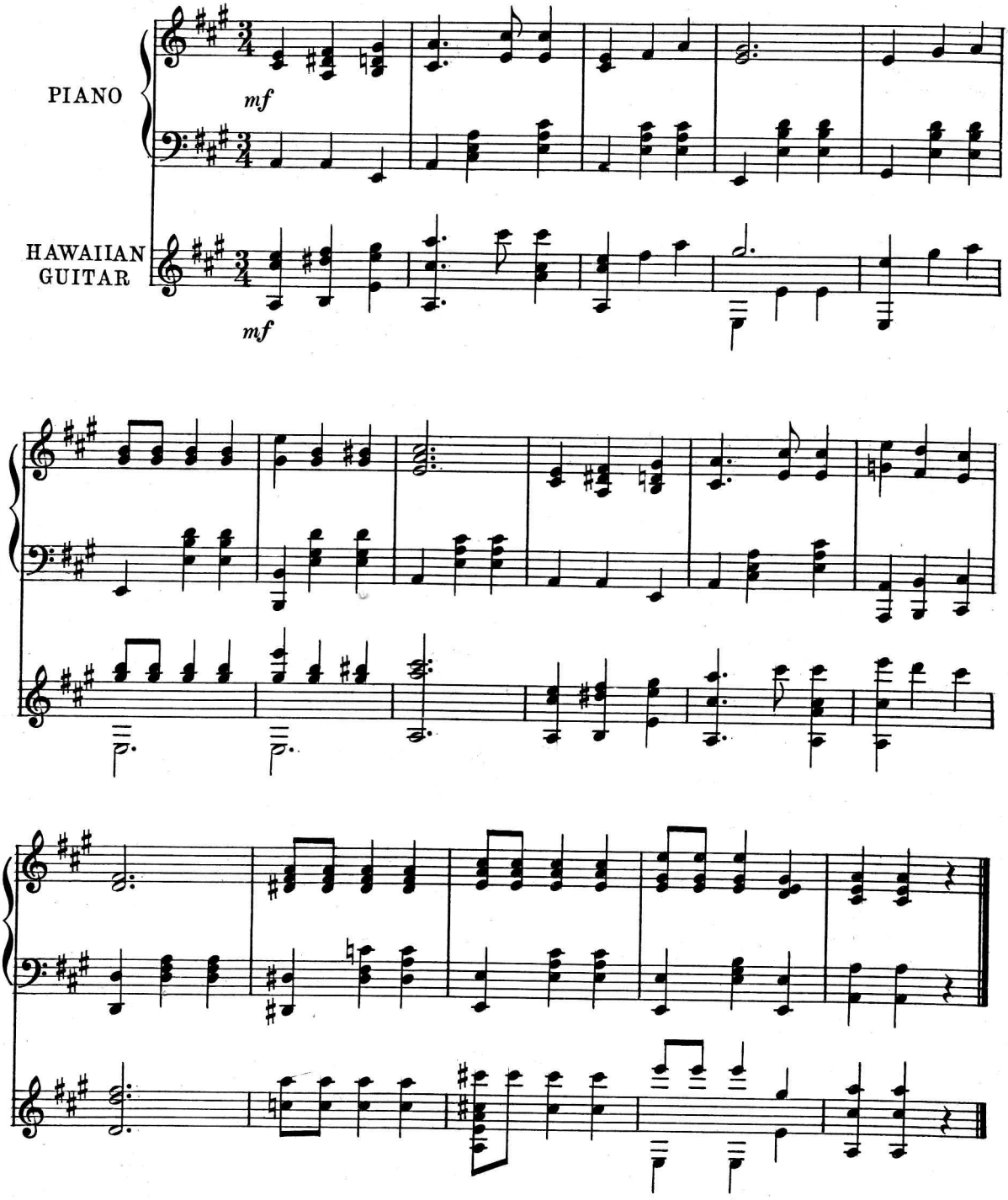
KAMIKI



When a piano chord is found impractical for Hawaiian guitar, a good substitute is obtained by employing a single note of the chord to mark the time beats, as shown in the 4th measure of the following waltz.

On The Beach

Wm J. SMITH
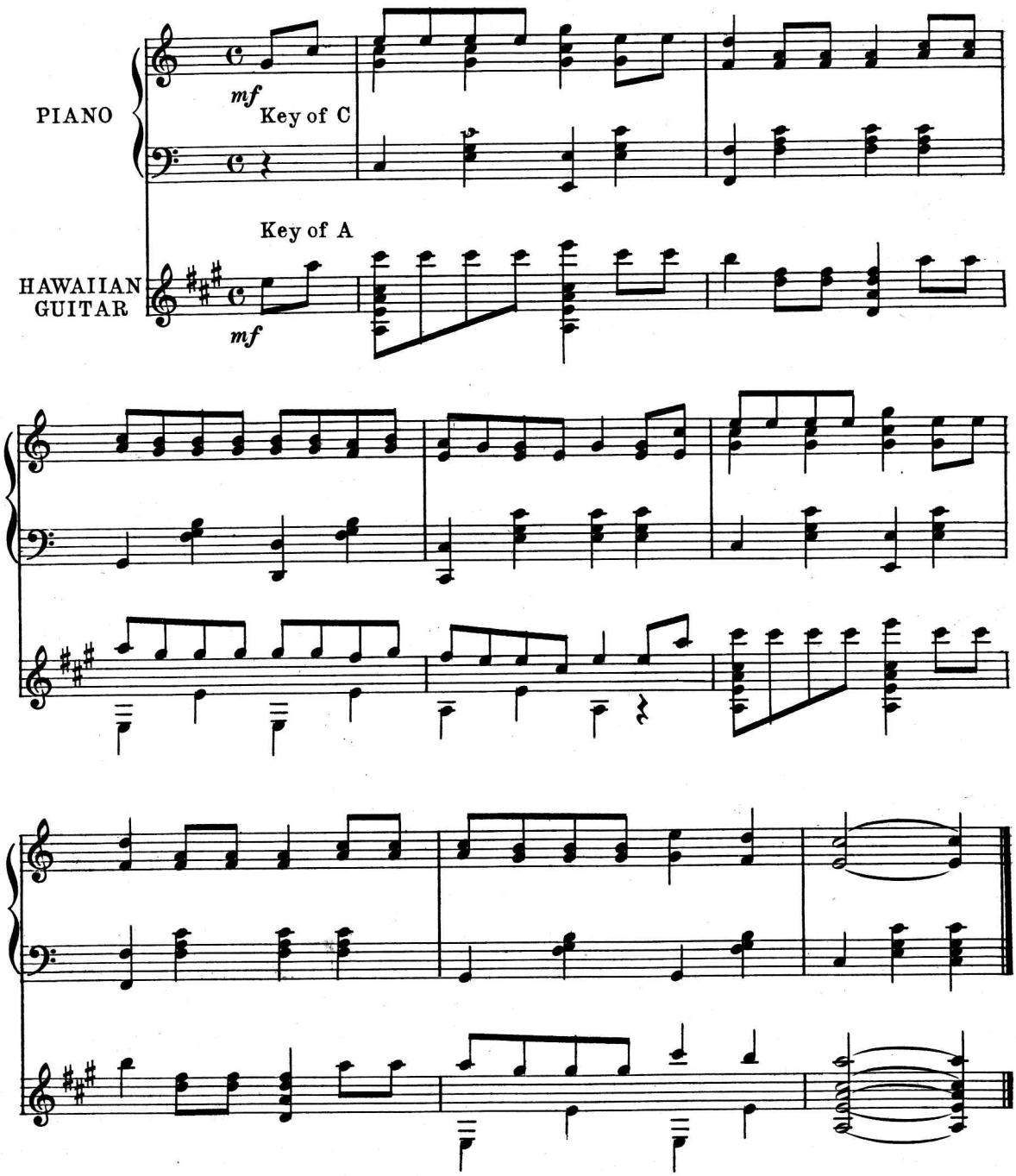


Transposing A Piano Solo

If the piano score is in a difficult key for Hawaiian guitar, it is frequently necessary to transpose the selection. The following shows the method of transposing a piano solo in C to the key of A for Hawaiian guitar.
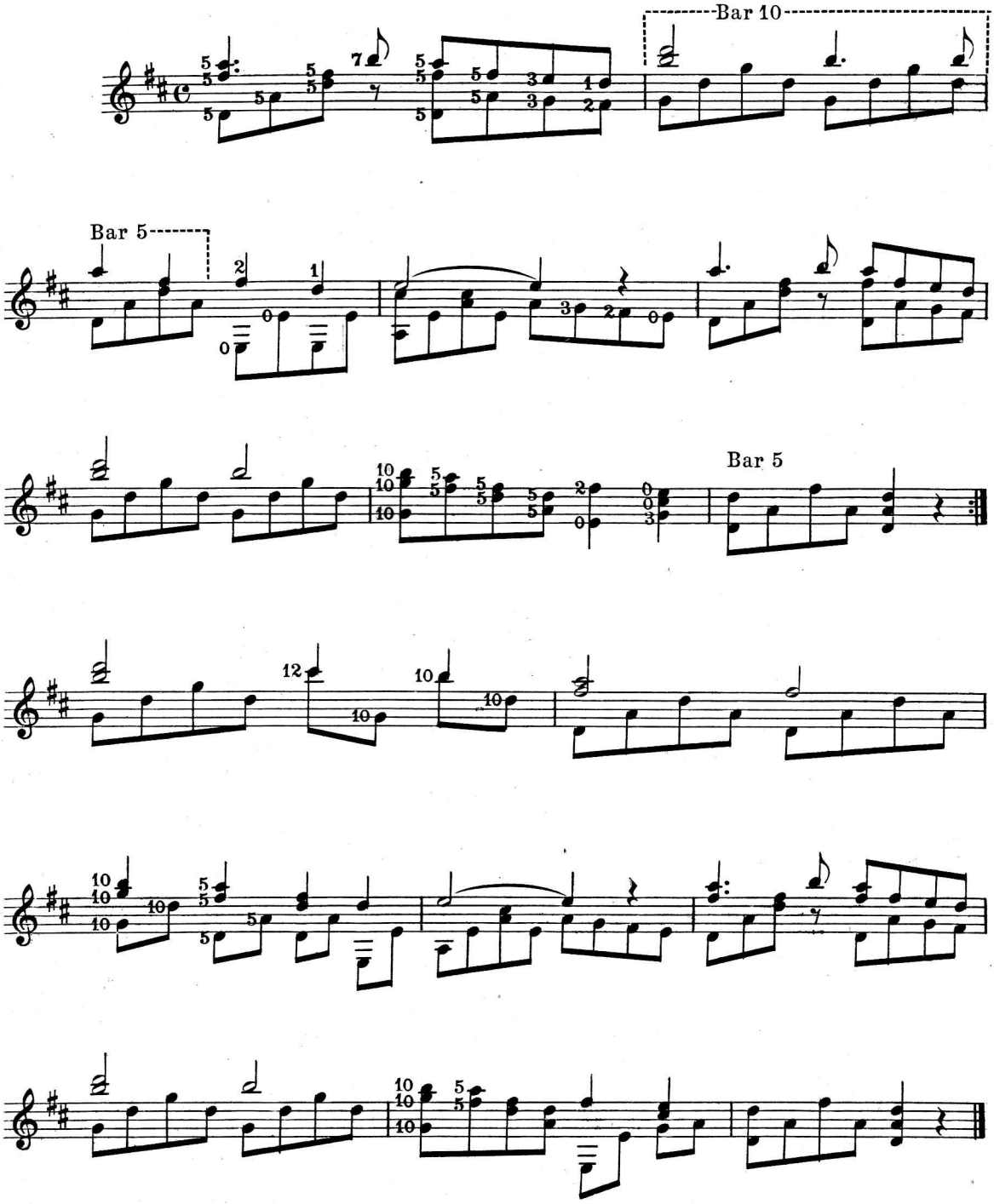
Hawaiian Love Song

KAMIKI



Instrumental Solos

The Hawaiian guitar has many excellent features which make it acceptable for instrumental solos. Sustained tones for the melody are secured on account of the long vibrations from its wire strings, and a very good accompaniment may be obtained on the lower strings. The following melody by Foster, shows how such effects are possible.



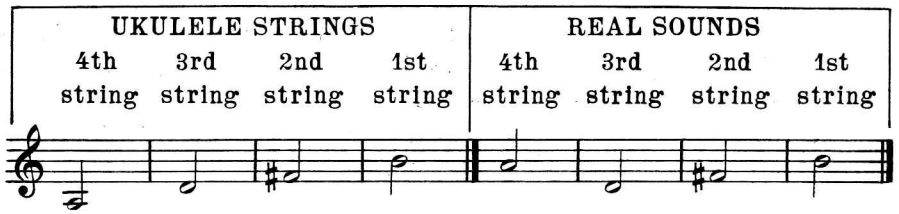
HARMONY FOR UKULELE

The wonderful popularity of the Ukulele comes from the simple minor tuning of its three upper strings, (1st, 2nd and 3rd.) These three strings resemble those of the regular guitar, although at a different pitch.

In addition to the Ukulele there has sprung up a small family of other instruments, all tuned along similar lines, and the examples given in this treatise can be applied to any one of them. These various instruments are:- Ukulele Banjo, Tiple, Guitar-Uke and Taropatch.

The Ukulele strings are tuned as shown below, and sound actual pitch except the 4th string, which sounds an octave higher than written.

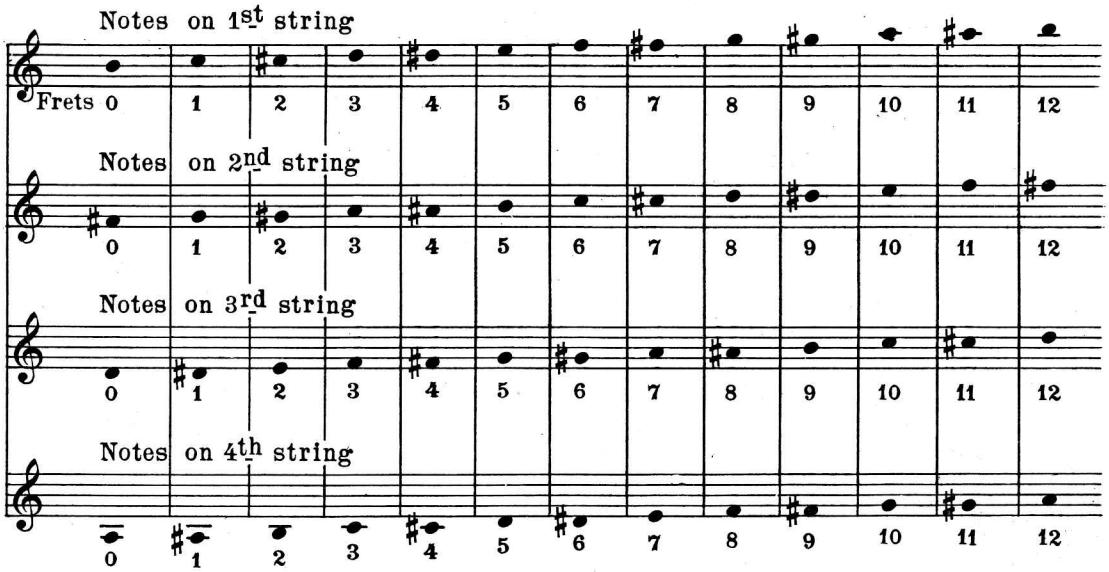
Ex. 1



Chords for the ukulele being executed by the "stroke," it is necessary to have four notes in every chord; consequently no string should be omitted from any chord in the accompaniment. This feature is easy to meet on account of the simple and uncomplex fingering for the left hand. Major, minor, diminished and augmenyed chords may be written, providing the different notes are conveniently placed on the ukulele fingerboard.

DIAGRAM OF FINGERBOARD

Ex. 2
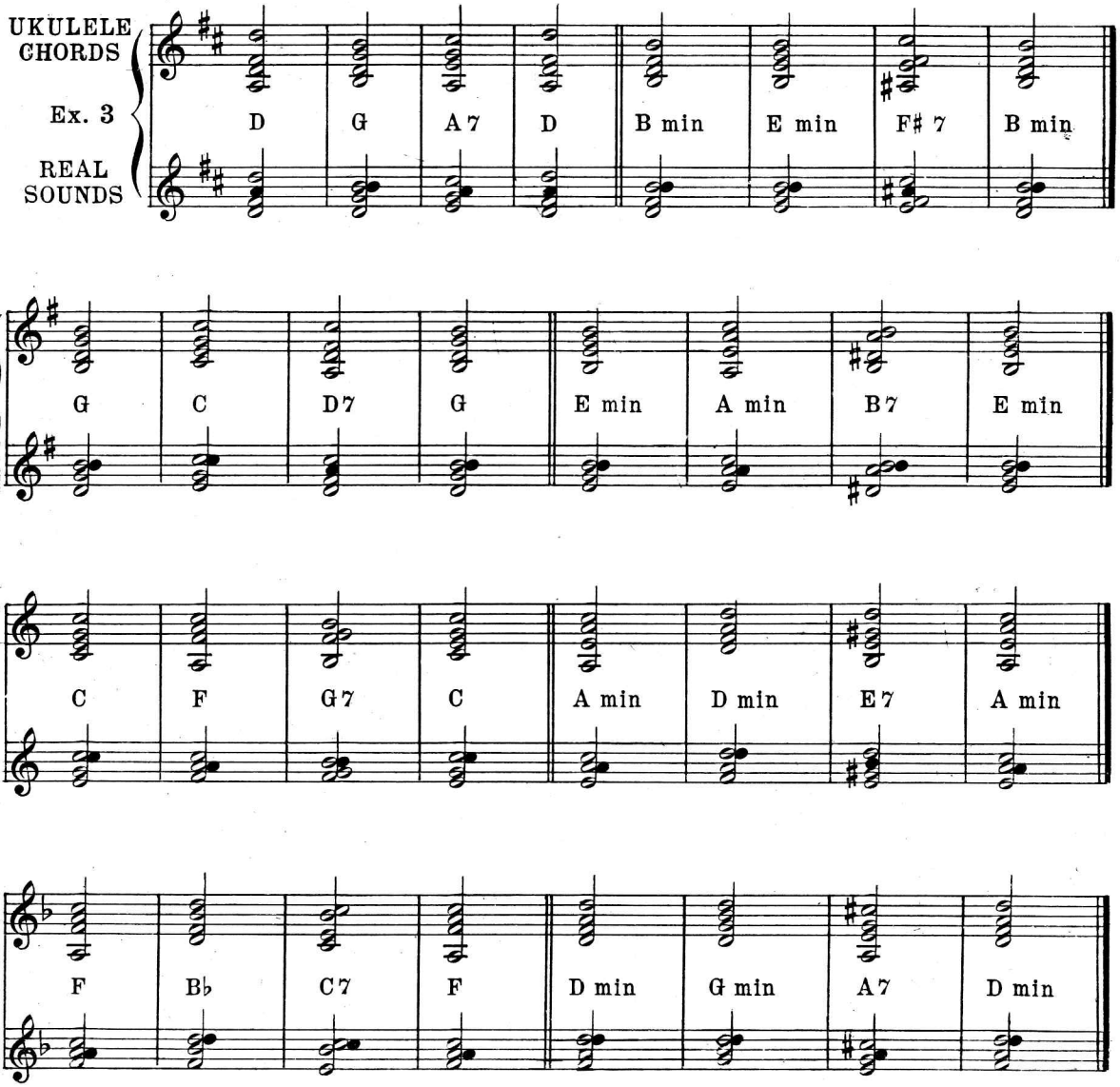


Notes played on the A or 4th string are written an octave lower to avoid confusion in reading

Some very agreeable and surprising combinations in chord construction, result from notes on the 4th string. This string sounding an octave higher than written, generally supplies a middle note in a four-voice chord, or takes a note in unison with 1st or 2nd string. The chord of D, for example, is written thus:-  but it really sound like this:- 

In the same manner the chord of A dominant 7th, looks like this:-  but the A, being an octave higher, makes the chord sound thus:- 

A few examples of ukulele chords are shown below, and the real effect given in the staff underneath. The black note in each chord indicates a note on the 4th string, where it either supplies a middle voice or sounds in unison with another string.



ACCOMPANIMENTS FOR UKULELE
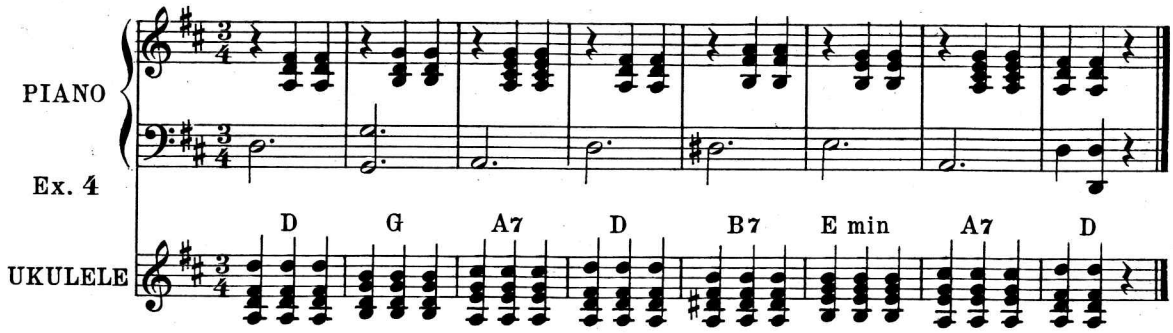
Chords on the ukulele sound best when another low toned instrument takes the bass or fundamental note of each chord. The notes on ukulele sounding actual pitch, with D as the lowest tone, an effective bass cannot be placed, and for that reason the nearest approach to a full accompaniment, is to have the chords come on both the accented and unaccented parts of a measure.

The quickest method of gaining facility in writing ukulele chords, is to begin with an easy song in the key of D, published for piano, and adapt the chords for ukulele--The following rules should be observed:-
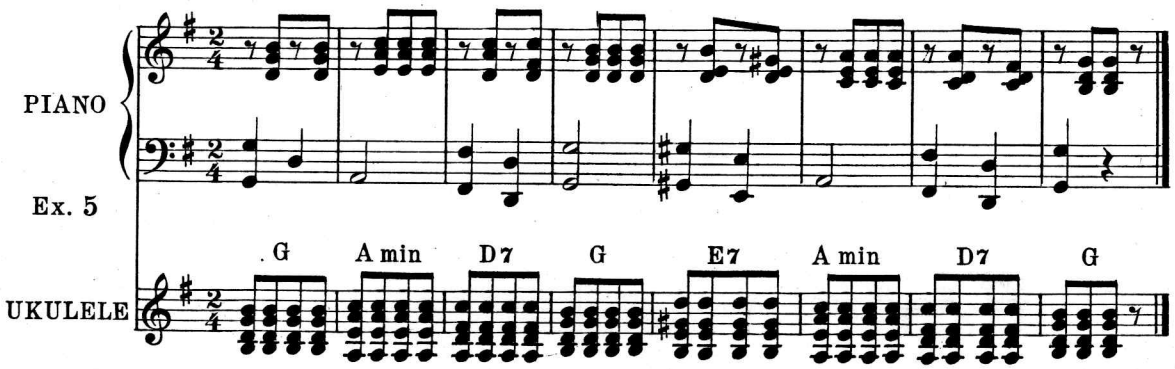
1.-- Write the key signature and the proper time marks, on one staff in the treble clef.
2.-- Observe the first chord in the printed copy. If this chord is D, write a D chord for each beat of the measure, to fit the ukulele.
3.-- The chord for piano must be recognized, even though the bass comes in the bass clef, and separate from other notes in the chord.
4.-- When a piano chord is placed so that the intervals are not practical for ukulele, the chord may be inverted to bring these intervals into a playable position on the ukulele fingerboard.
5.-- If any note in a piano chord cannot be included for the ukulele, omit that note providing the remaining notes furnish a satisfactory chord.

In adapting piano chords for ukulele the main point is the ability to recognize and name a chord, at once, before transfering the notes to ukulele. If the previous examples in Part 1 have been studied, this will be found comparatively easy.

Copy the following ukulele part in the key of D, and compare each chord, as you write it, with the piano score.
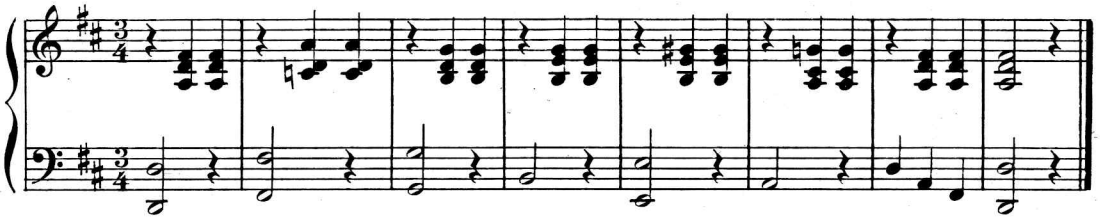


In the same way copy the following ukulele accompaniment in the key of G.
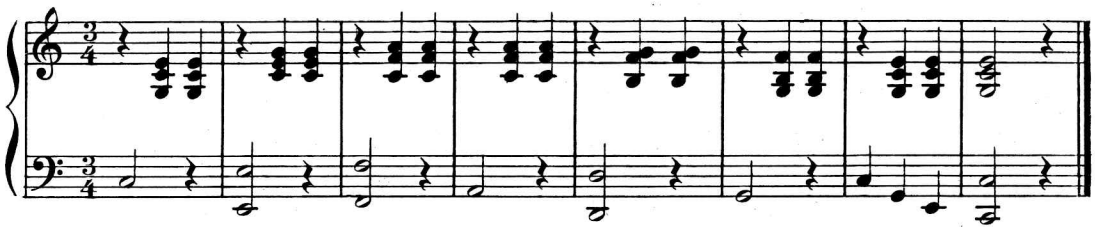


EXERCISES

Arrange the following piano accompaniments to suit the ukulele fingerboard. each exercise in the same key as piano.
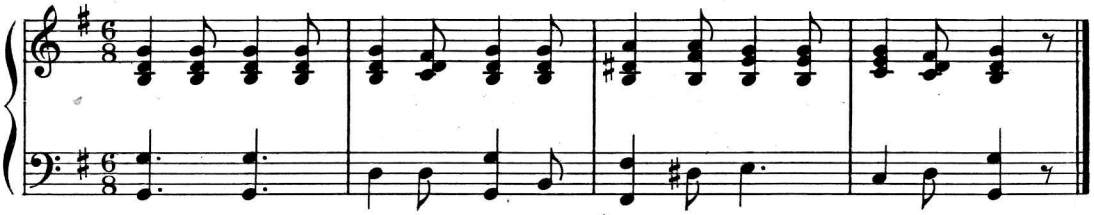
Ex. 6
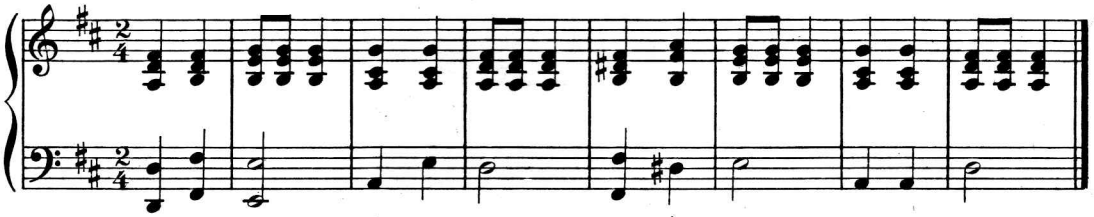


Ex. 7
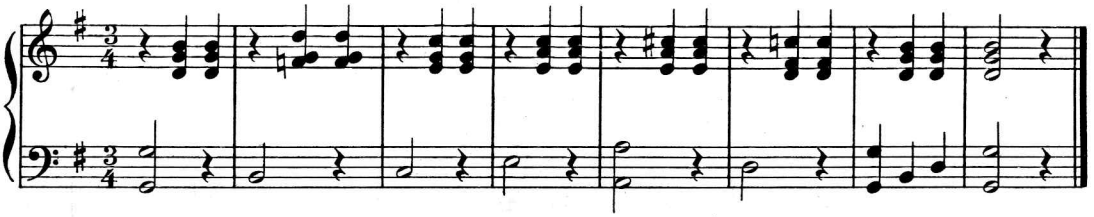


Ex. 8



Ex. 9



Ex. 10



HOW TO TRANSPOSE AN ACCOMPANIMENT

When the piano accompaniment is printed in a key that is too low or high for the singer, the key must be changed or "transposed." If the piano score is in B-flet and the vocalist wishes to sing in D, the chords for ukulele must be written in the key of D.
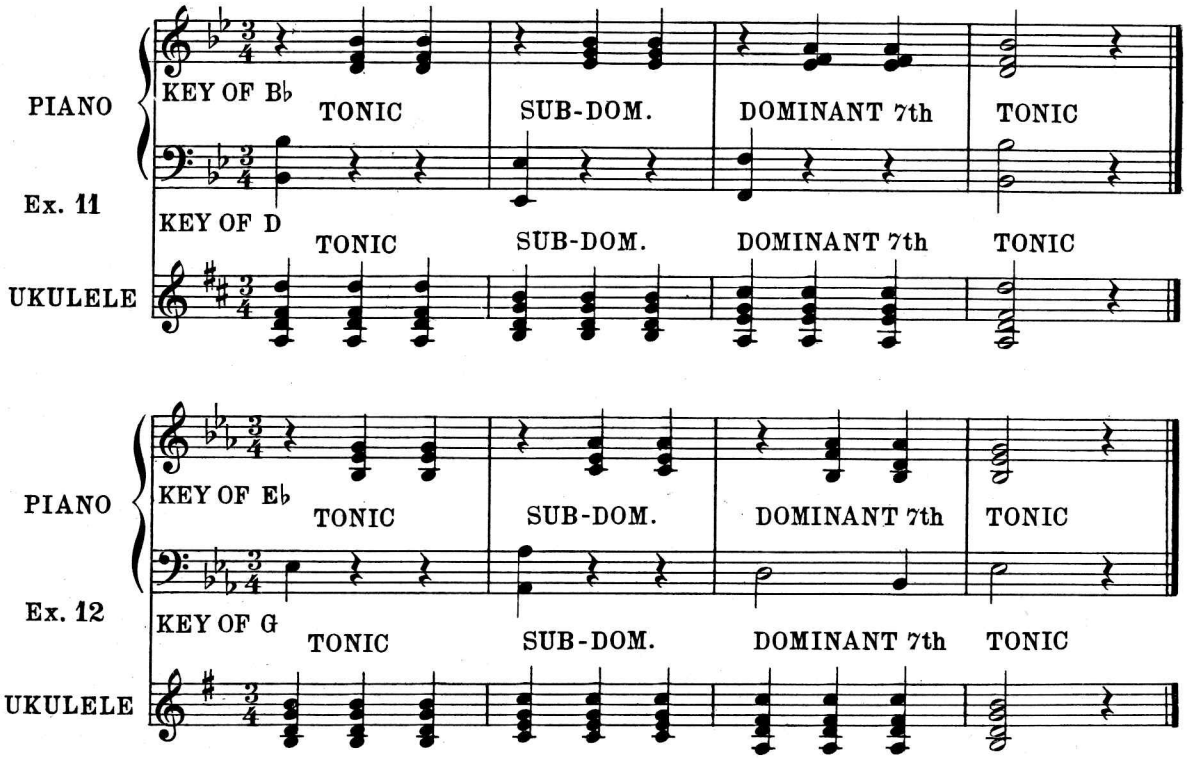
A detailed explanation of transposition will be found in Part 1, Chapter 1.

In transposing a ukulele accompaniment from a piano score, the first thing is to write the proper signature for the new key, on a single staff with treble clef, and place the correct time symbols. The next point is to find how much lower or higher this new key is from the old one. If the piano key is B-flat and you want the ukulele to be D, we find that D is a major third higher than B-flat. This interval, a major third, becomes an infallible guide in writing the ukulele chords -- for if the piano chord is B-flat, the ukulele chord must be D, a major third higher than B-flat. In the same way all other chords in the piano part, must be placed a major third higher for ukulele. The F chord for piano becomes an A chord for ukulele, the E-flat chord on piano must be a G chord for ukulele, while a G-minor becomes B minor.

The entire process of transposing an accompaniment, rests on the quick recognition of a chord in the old key, and the changeing of that chord to fit the new. If this method is followed there will be no necessity of laborously picking out individual notes of a chord, one at a time, and tediously joining them together in their new home. Think of the chord at once, as a complete chord, and the individual notes can be assembled quite readily to fit the ukulele fingerboard.

In conjunction with instant recognition of any chord to be transposed, it is a tremendous advantage to know and be conscious of the chord's importance in the old key, so that when transposed into the new key its value is the same. If the chord is the tonic it must be, when transposed, the tonic of the new key, if the dominant 7th, it must be dominant 7th in the new key, and so on.
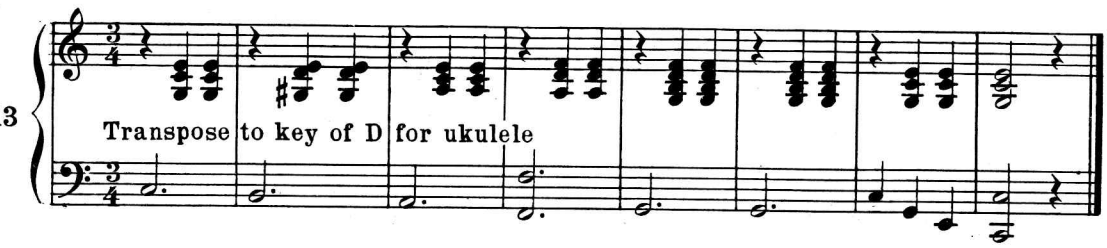
Write the following ukulele chords and observe how their relative importance, when transposed from piano, remains the same.
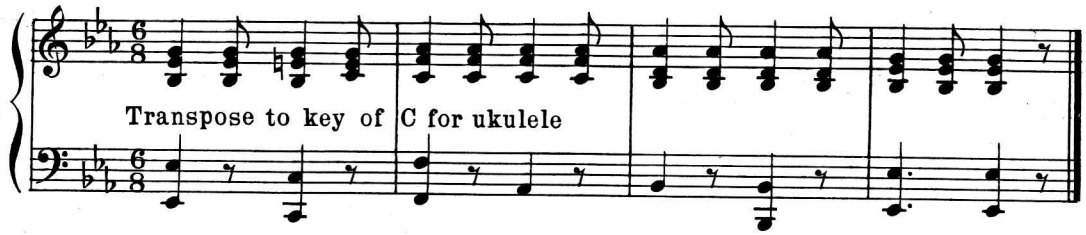


EXERCISES

The following piano accompaniments are to be arranged for ukulele, transpoing them into keys as marked.
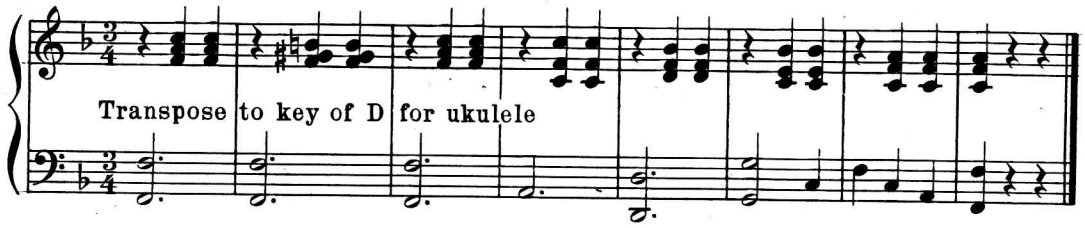
Ex. 13
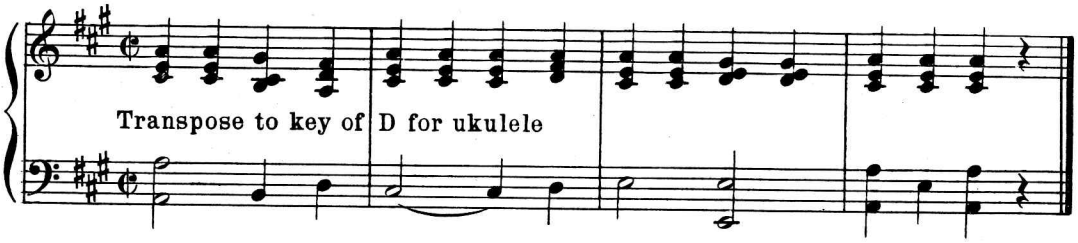


Ex. 14
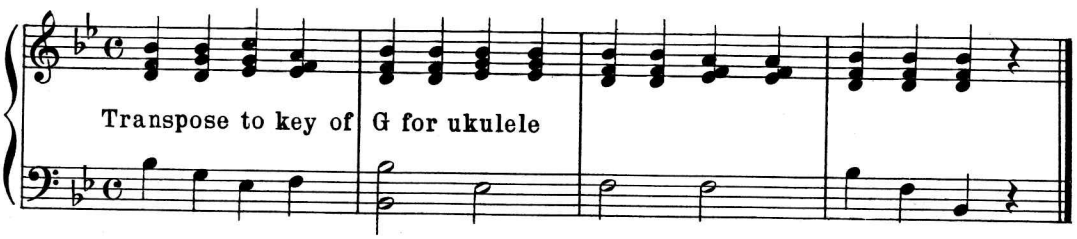


Ex. 15



Ex. 16



Ex. 17



HARMONIZING MELODIES

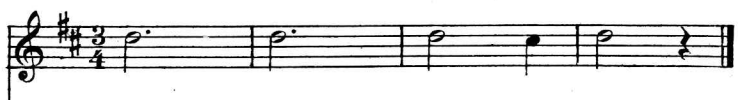
The preceding ukulele accompaniments were comparatively easy to write, on account of their being merely a transposition from a piano score to chords for ukulele. When a melody alone is given, for which the necessary chords are to be supplied, it becomes a more difficult task, because these chords must harmonize the melody. Chords may be formed on any degree of the scale, the relative importance of each chord being as follows:-

1 -- The tonic triad is much used in every position, and always terminates the accompaniment.
2 -- The chord on the second degree is frequently used.
3 -- The chord on the third degree is employed rarely.
4 -- The subdominant triad is used in any form.
5 -- The dominant or dominant 7th is much used.
6 -- The chord on the sixth degree is frequently used.
7 -- The leading-tone triad seldom occurs except with its third in the bass.
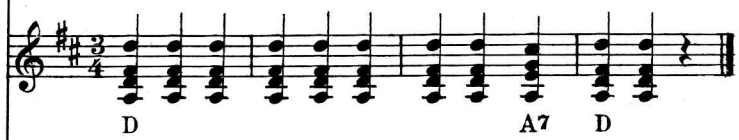
Very often a melody can be harmonized several different ways, each form presenting a new turn in the harmonic progression which imparts a different background for the melody. The waltz melody shown here is harmonized several ways, any one of them, taken alone, would be acceptable.

Ex. 18
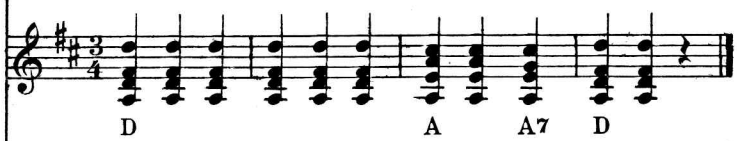
MELODY to be harmonized.
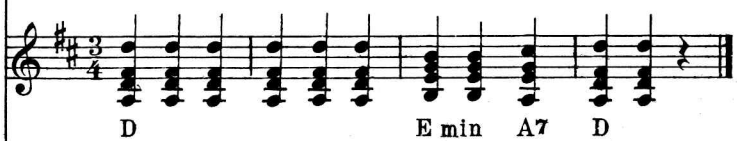


UKULELE CHORDS
First form using the tonic and dominant 7th chords.
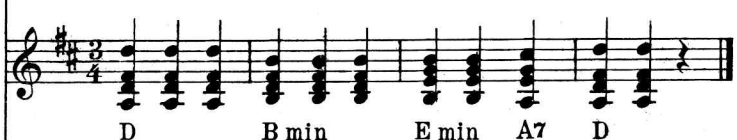


Second form. The high D in third measure of the melody is a suspension.
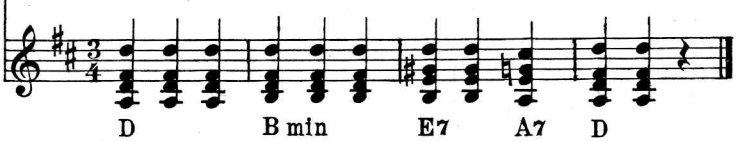


Third form introducing the E minor chord in third measure.
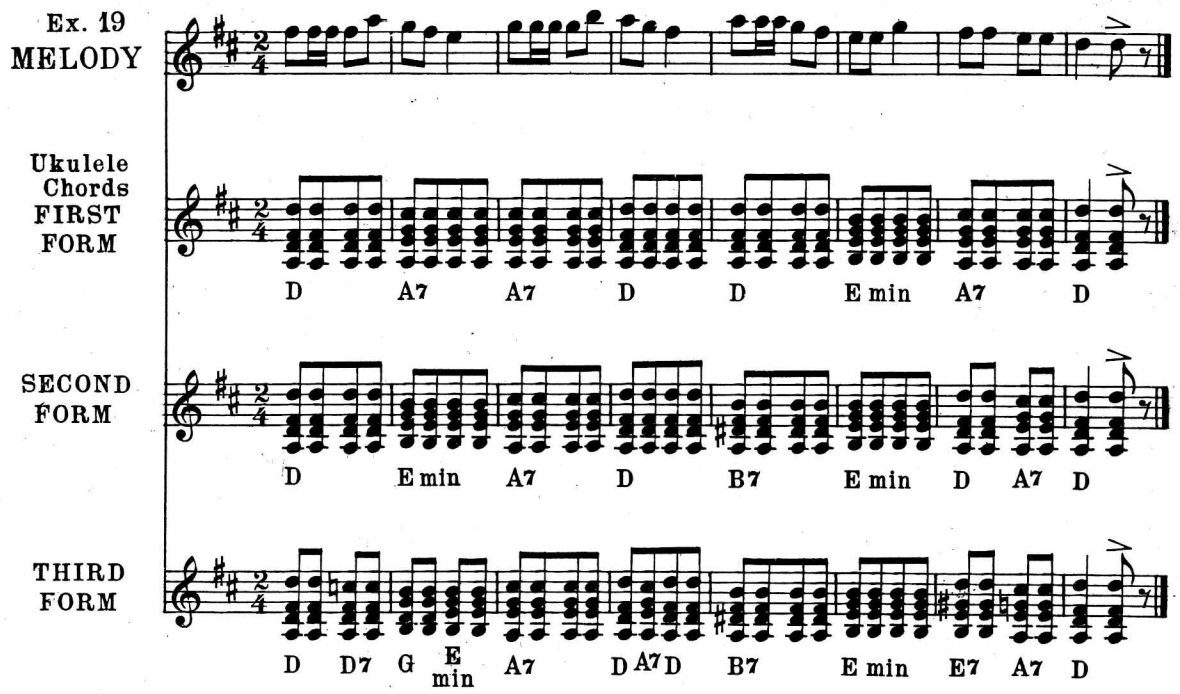


Fourth form introducing the B minor chord in second measure.



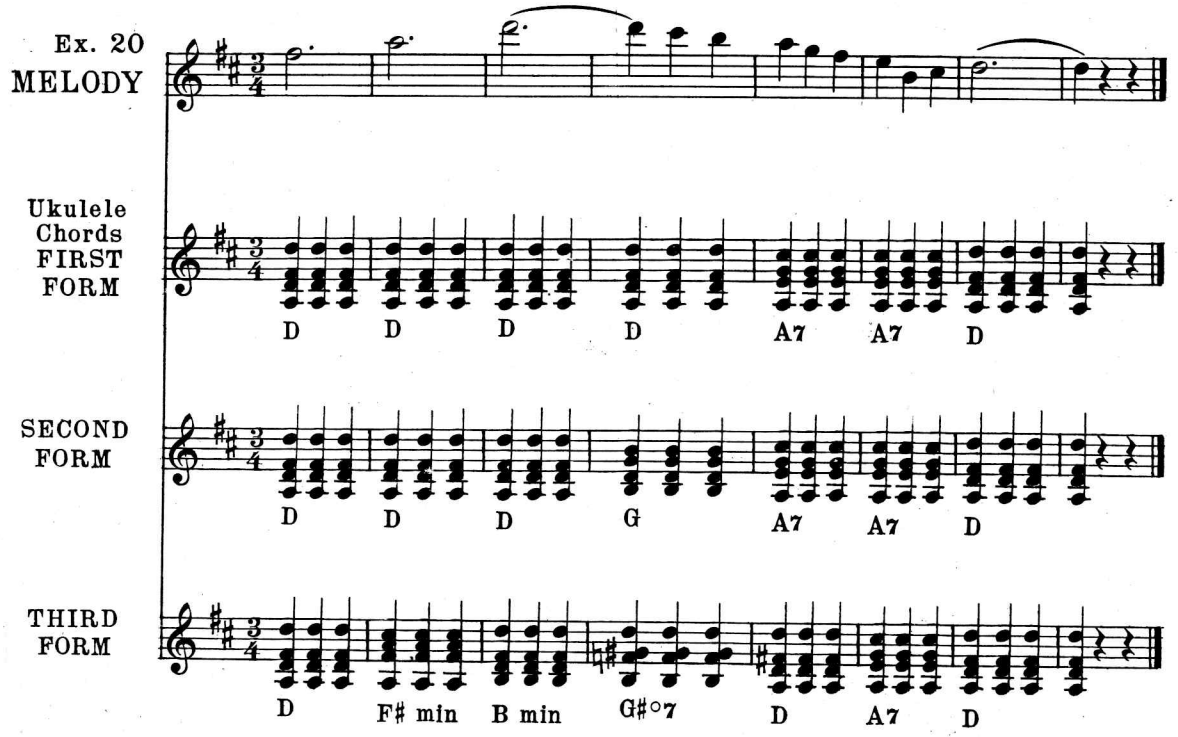
Fifth form introducing the E dominant 7th in third measure.



Orchestra performers mark each chord with a letter designating its name. This plan will be used here. A diminished chord has the ○ sign after the letter.



Copy these ukulele chords and play each accompaniment in order to note the various changes.
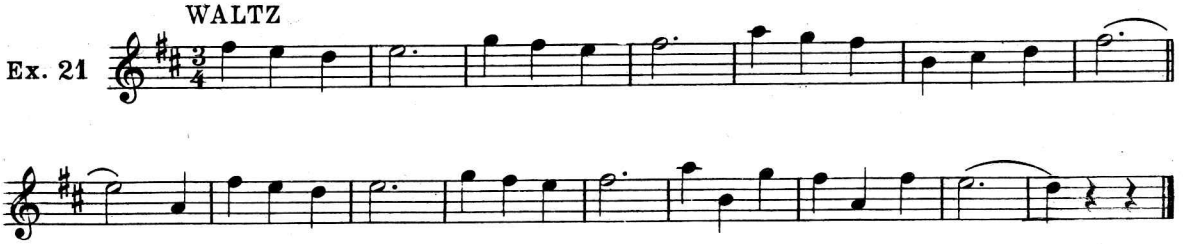


EXERCISES

Write ukulele accompaniments for the following melodies.
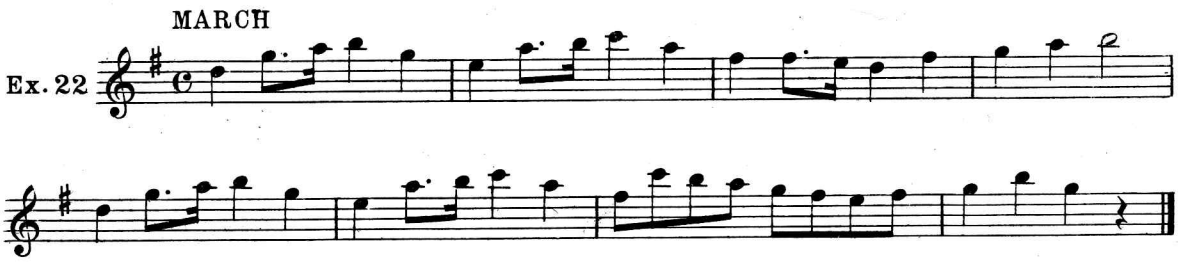
WALTZ

Ex. 21
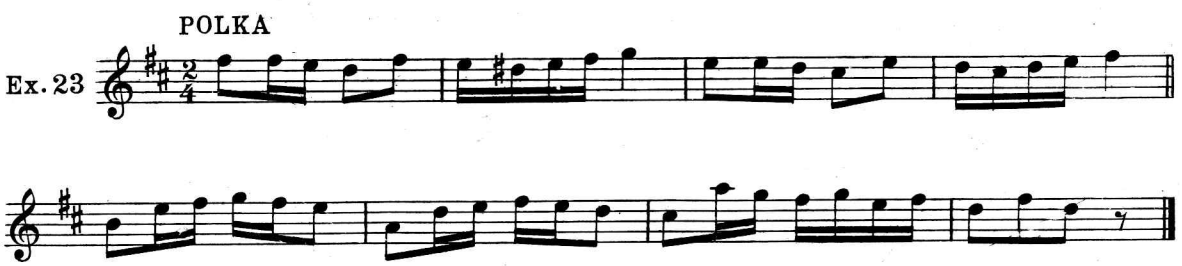


MARCH

Ex. 22
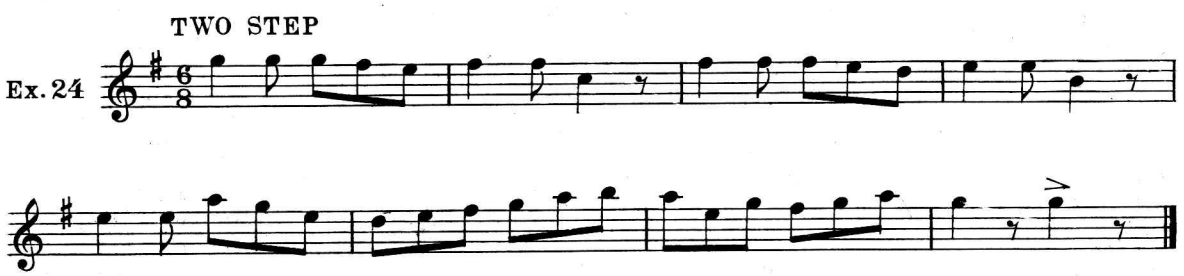


POLKA

Ex. 23
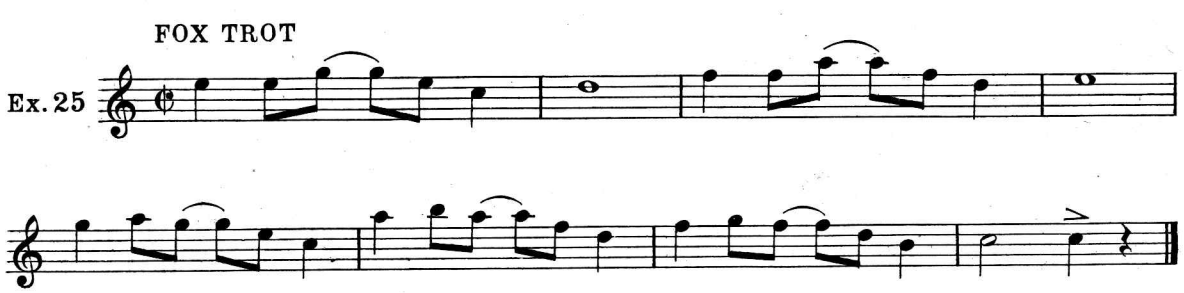


TWO STEP

Ex. 24



FOX TROT
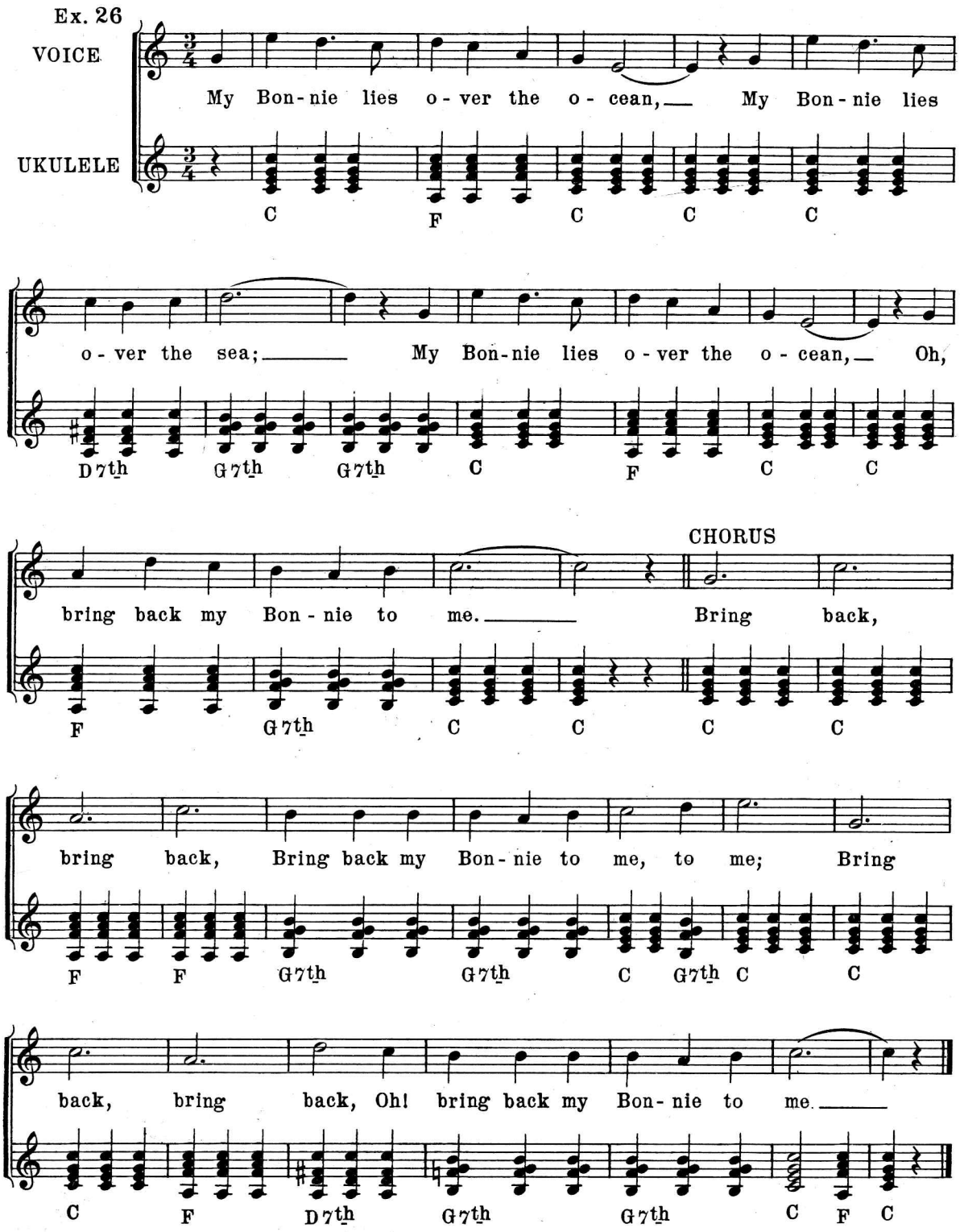
Ex. 25



UKULELE AND VOICE

For playing accompaniments to vocal selections, the ukulele chords must be written out in full, on both the accented and unaccented parts of each measure.

Ex. 26



UKULELE SOLOS
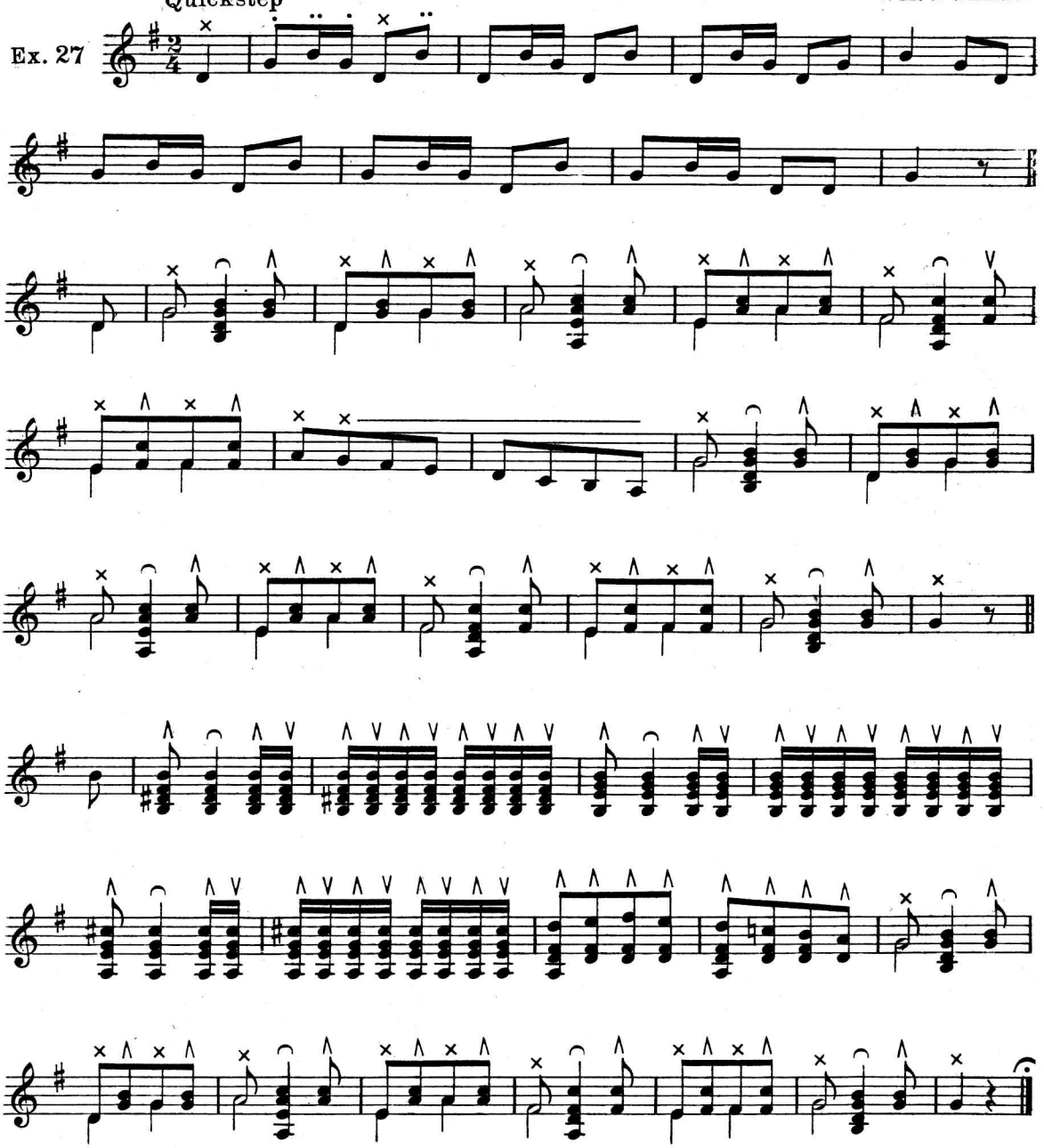
For instrumental solos the melody can often be taken by 2nd or 3rd strings as shown below, although the general plan is for the 1st and 2nd strings to have the principal melody. Single notes are also effective on the ukulele.

The "Ukulele Band"

Quickstep

WM. J. SMITH

Ex. 27



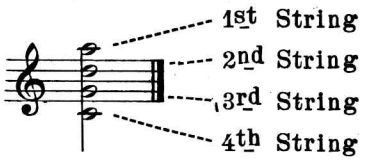
NOTE: ⌒ Downward Roll
× Pick with Thumb
. " " First finger
.. " " Second finger
∧ Strike with nail of First finger

HARMONY FOR TENOR BANJO

The prevailing character of chords on the tenor banjo, is open harmony throughout the entire fingerboard. Close harmony may occasionally be employed between two voices, but the strings being tuned in fifths, a prolonged succession in close position becomes difficult. This feature applies to all instruments tuned in fifths, such as Mandolin, Mandola and Mando-cello, and the exercises given here can be adjusted to suit those instruments.

The tenor banjo strings are tuned as shown here, but sound an octave lower, the low C being the same as C on 2nd space of bass clef.
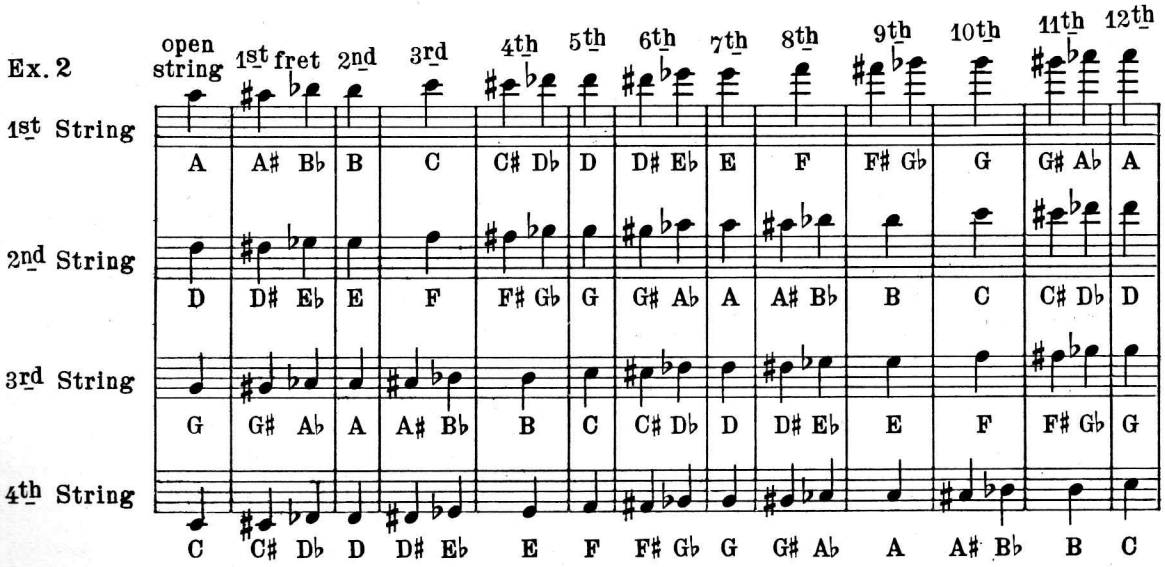
Ex. 1



A study of the tenor banjo fingerboard, will reveal the interesting fact that it is modeled after the viola. Chords of four notes are possible on the tenor banjo owing to the flat bridge.

Tenor Banjo Fingerboard

Ex. 2



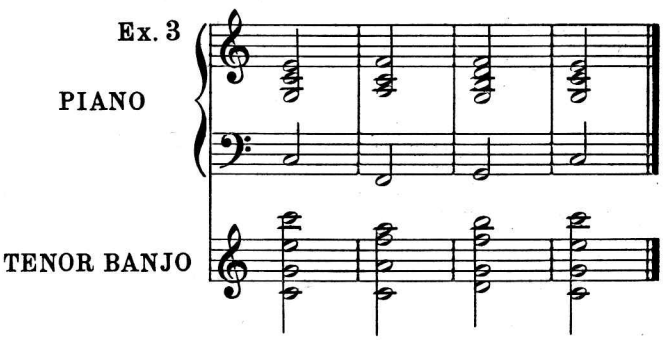
Bass And Chords For Tenor Banjo

Accompaniments for tenor banjo are often written in the so-called "free style," where the bass and chords are separated. The general custom, however, is to assign full chords, on both the accented and unaccented parts of a measure; a condition which originated in orchestra work, where the real bass is taken by piano or double bass violin. Orchestral scores for tenor banjo containing a prolonged string of four-note chords, invariably show wrong progressions, false relations and a medley of difficult changes placed without regard to the player's fingers. Open harmony, on an instrument with only four strings, is easy enough when confined to say, two or even three notes, but the constant use of full chords makes correct harmonic progression impossible. For this reason an occasional three-note chord is to be commended. Owing to the plectrum's manipulation, all three-note chords must include the two middle strings, the other note being taken by either 1st or 4th strings.

In writing accompaniments for tenor banjo the essential requirement is to assemble the notes so that they fit the tenor banjo fingerboard-- in other words the chords must be playable. If they lack this feature the banjoist cannot be blamed for substituting his own chords which, unfortunately, do not always harmonize with the orchestra.

Chords for tenor banjo look different from those on piano; being an octave above and in open harmony. The tonic, subdominant and dominant 7th chords of C major are shown here for piano, and the same adapted for tenor banjo.

Ex. 3



The best method for gaining facility in writing tenor banjo chords, is to begin with an easy song in the key of C, published for piano, and adapt the chords to suit the tenor banjo fingerboard. This can be quickly mastered if the following rules are observed:-

1- Write the treble clef for C and place the proper time symbols. Blank music paper should be used and the writing done in ink.

2- Observe the first bass note in the piano score and the chord which follows. This bass and the notes that follow in the treble clef, will form a complete chord which must be recognized and named before attempting to arrange for your copy.
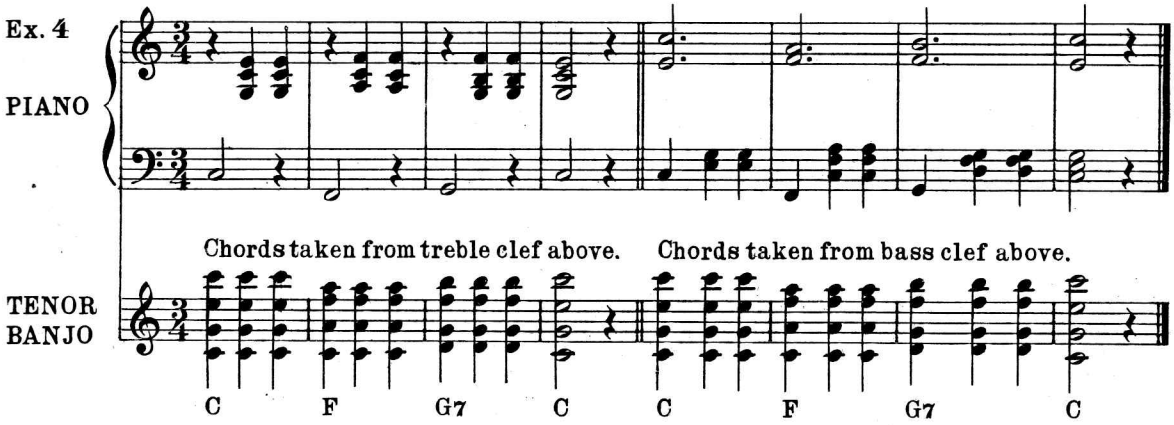
3- If this first bass is C and the after notes belong to that chord, a mental picture of the C chord for tenor banjo will come naturally.

4- Open harmony being necessary, this chord of C must have the notes dispersed to suit the tenor banjo fingering.
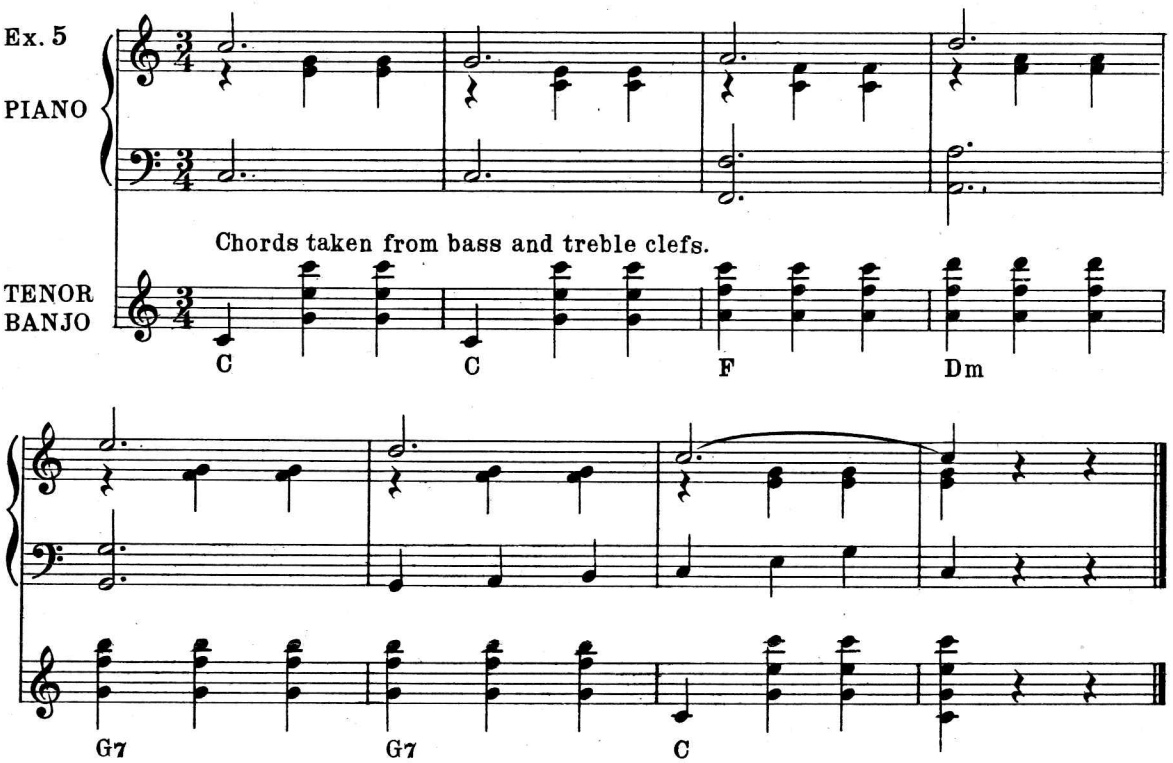
When a piano chord is placed so that the intervals are not practical for tenor banjo, the chord must be inverted to bring these intervals within range of the banjo player's fingers.

In adapting piano chords for tenor banjo the chief point is the ability to recognize and name the piano chord at sight, before transfering the notes to tenor banjo. When both bass and chord are in the bass clef, the task becomes more difficult, but with a little practice it can soon be mastered.

Copy the following tenor banjo part in the key of C, and compare each chord, as you write it, with the piano score.
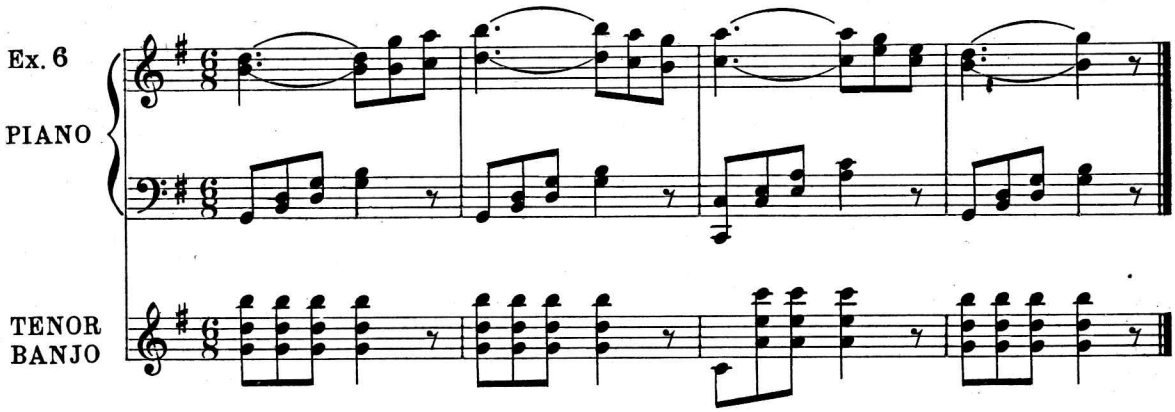


When the harmony for piano is divided, as shown in the following example, the notes for tenor banjo chords must be taken from both treble and bass clefs.
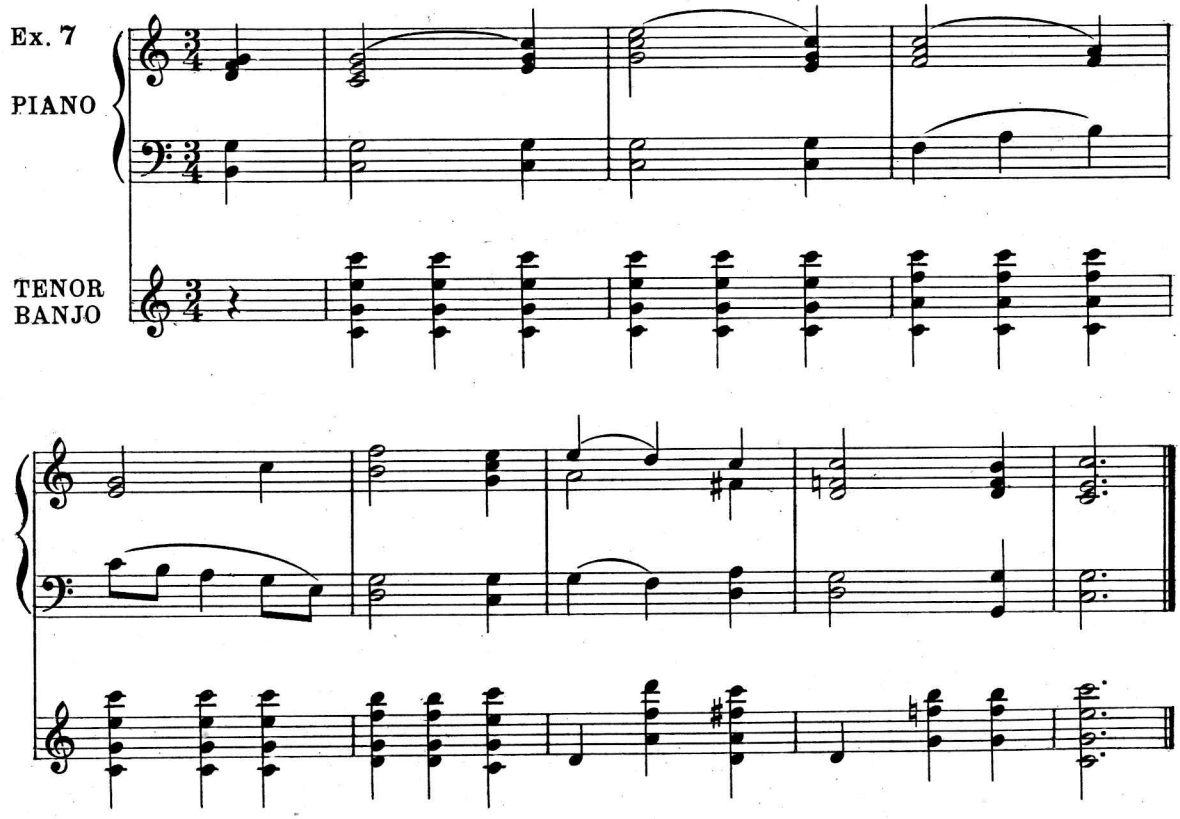


When double notes occur in arpeggio for piano, it is often better to give the tenor banjo chords instead, as shown below.

Always end an accompaniment on the tonic chord with root in the bass; never end with a six-four chord.



A piano score having passing-notes in the bass cannot always be duplicated on a tenor banjo. When this happens ignore them and write chords. (See measures 4 and 6 below.)



Transposition Of Keys

It is often necessary to change the key when a composition runs too high or low for the vocal range. If the piano accompaniment, for example, is in the key of A-flat, and the vocalist wishes to sing in C, the accompaniment for tenor banjo must be written in C; in other words it must be transposed.

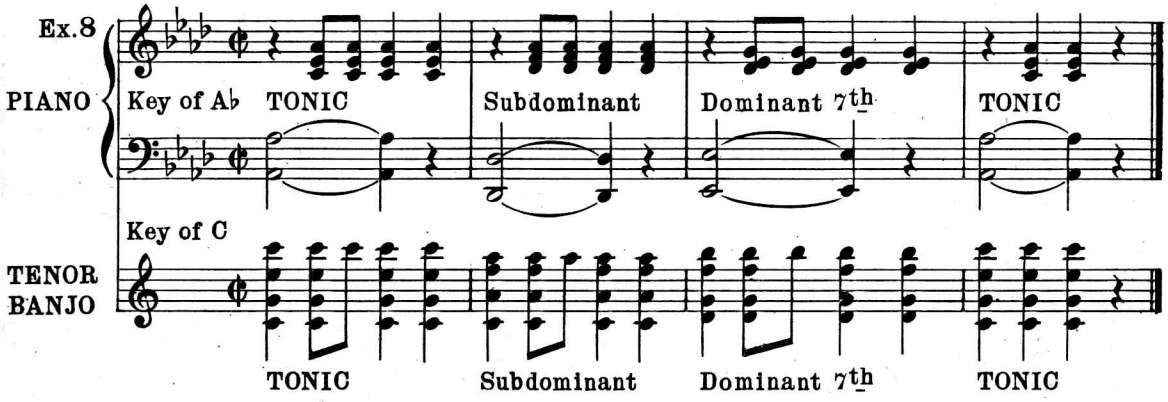
For a detailed explanation of transposition see Part 1, Chapter I.

In transposing a tenor banjo accompaniment from a piano score, the first thing is to write the proper signature for the new key on a single staff in treble clef, and place the correct time symbols. The next point is to find how much higher or lower this new key is from the old one. If the piano key is A-flat and you wish the tenor banjo to be in C, we find that C is a major third higher than A-flat. This interval, a major third, becomes an infallible guide for writing the tenor banjo chords- for if the piano chord is A-flat, the banjo chord must be C, a major third higher than A-flat. In the same way all other chords in the piano part, must be placed a major third higher for tenor banjo. The D-flat chord for piano becomes an F chord for banjo, the E-flat chord must be a G chord, and so on.

The entire process of transposition rests on the quick recognition of a chord in the old key, and the mental operation of changing that chord to fit the new. If this method is adopted there will be no necessity of tediously picking out individual notes of a chord, one at a time, and laborously joining them together afterwards. Think of the chord at once, as a complete chord, and the individual notes can be assembled quite readily to fit the tenor banjo fingerboard. If the studies and exercises in Part 1 of this treatise have been carefully worked out, the immediate recognition of a chord becomes very simple.
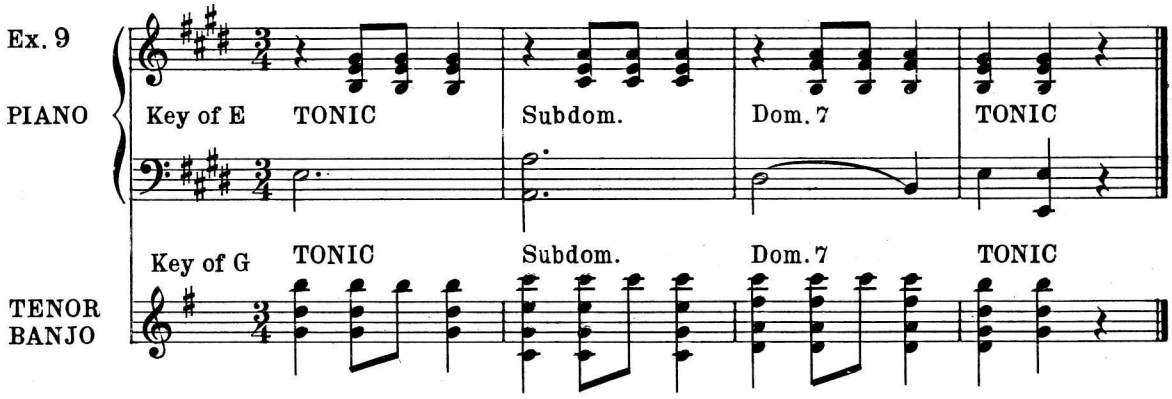
In conjunction with the instant recognition of any chord to be transposed, it is a tremendous advantage to know and be conscious of the chord's importance in the old key, so that when transposed into the new key its value is the same. If the chord is the tonic it must be, when transposed, the tonic of the new key, if the dominant 7th it must be dominant 7th of the new key, etc.
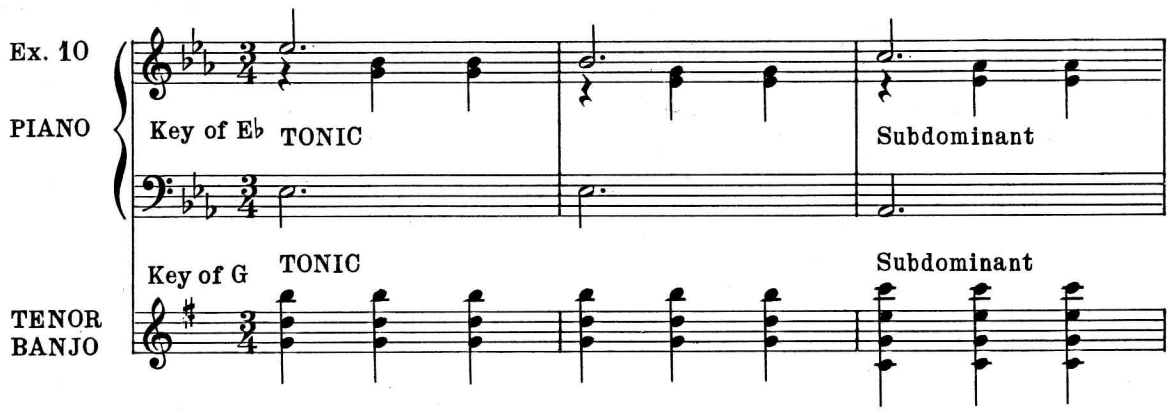
Write the following tenor banjo chords and observe how their relative importance, when transposed, remains the same.

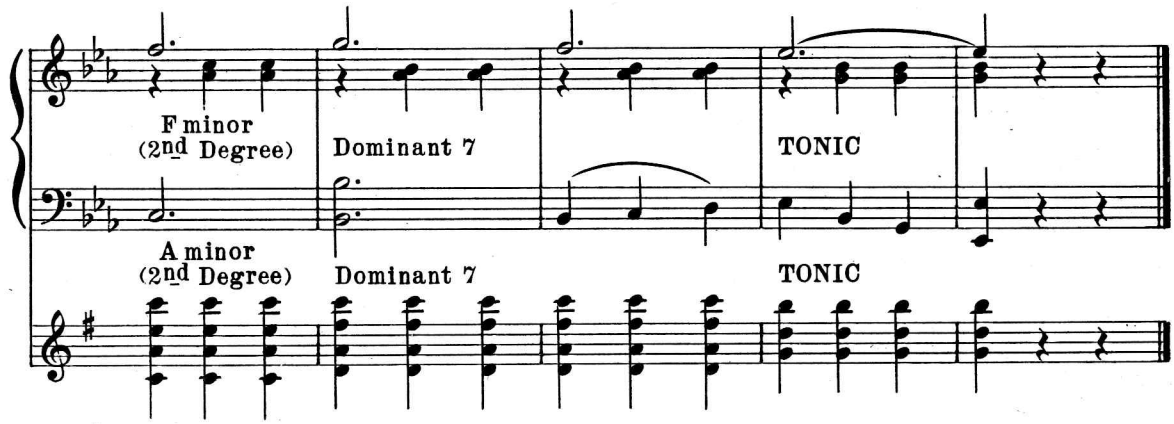


If the piano score is in E, and you wish the tenor banjo to be in G, each chord must be transposed a minor third higher.

In example 9 of the tenor banjo, consecutive fifths will be noticed in going from the 2nd to 3rd measure. When confined to lower voices of a chord this may be permitted, although not strictly correct.
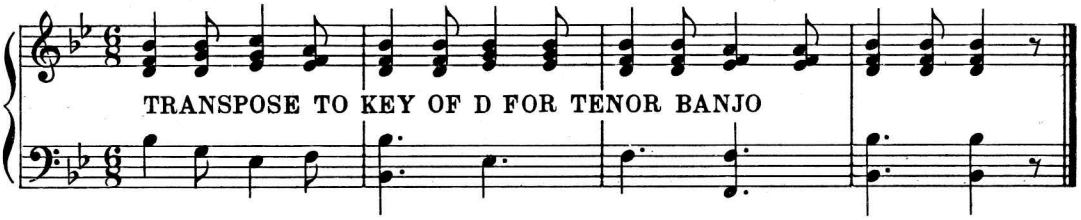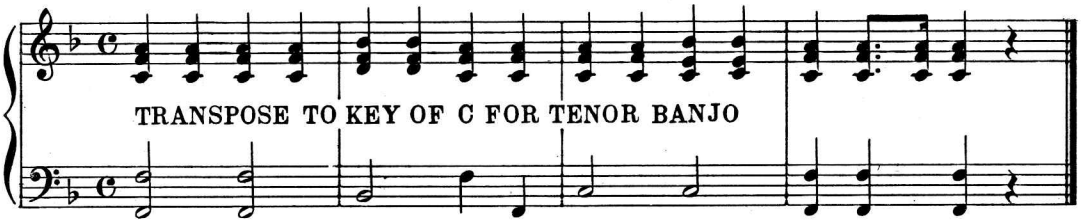






Exercises

Transpose the following piano accompaniments into the keys marked. Write all exercises in ink on blank music paper.
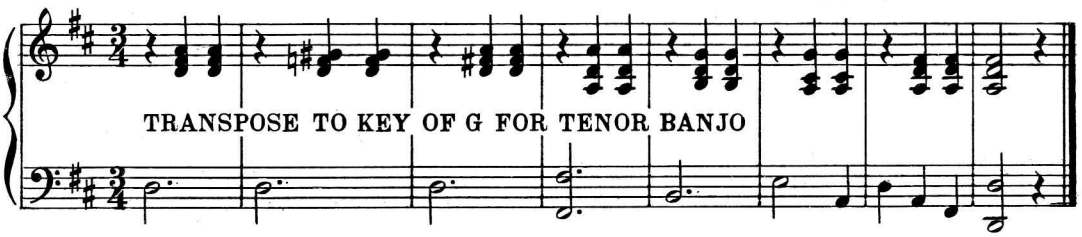
Ex. 11
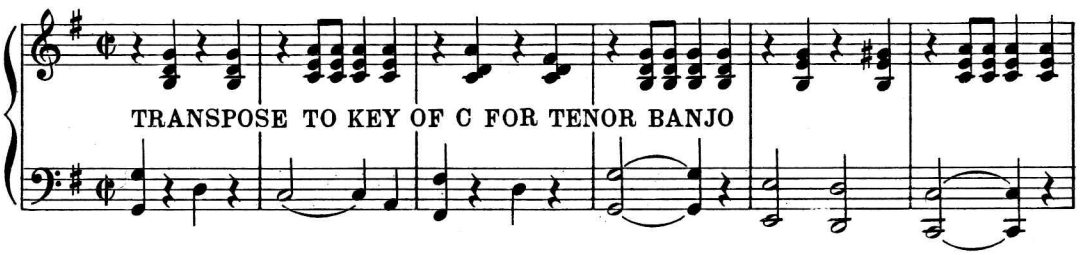


Ex. 12
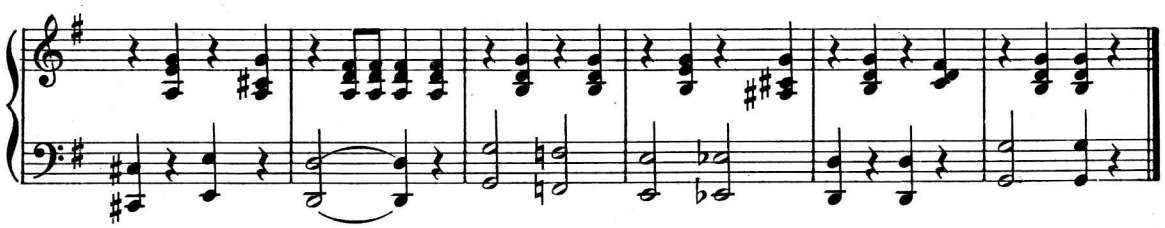


Ex. 13



Ex. 14





Harmonizing Melodies

The preceding tenor banjo accompaniments were comparatively easy to write, on account of their being merely a transposition from a piano score to chords for tenor banjo. When a melody alone is given, for which the necessary chords are to be supplied, it becomes a more difficult task, because these chords must harmonize the melody. Chords may be formed on any degree of the scale, the relative importance of each chord being as follows:-

1- The tonic triad is much used in every position, and always terminates the accompaniment.

2- The chord on the second degree is frequently used.

3- The chord on the third degree is employed rarely.

4- The subdominant triad is used in any form.

5- The dominant or dominant 7th is much used.

6- The chord on the sixth degree is frequently used, and generally has its root in the bass.

7- The leading-tone triad seldom occurs except with its third in the bass.

Very often a melody can be harmonized several different ways, each form presenting a new turn in the harmonic progression which imparts a different background for the melody. The waltz melody shown here is harmonized several ways, any one of them, taken alone, would be acceptable. It is this element of choice which makes the harmonizing of a melody so attractive, and makes the exercises interesting.

Ex. 15

MELODY to be harmonized.

TENOR BANJO CHORDS.
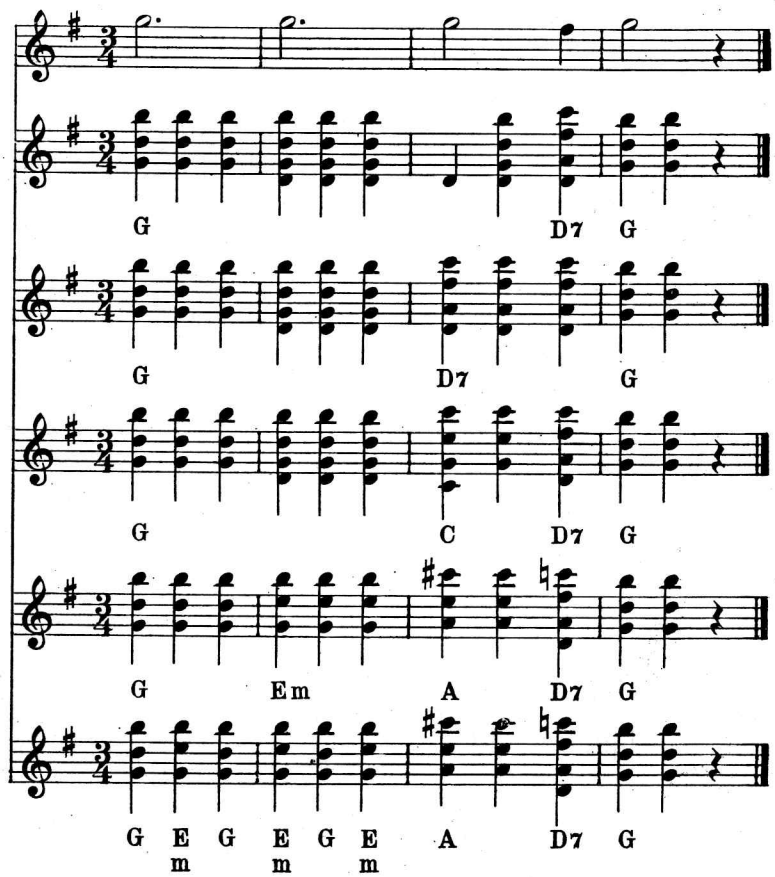
First form using the tonic and dominant 7th chords.

Second form, The high G in third measure of the melody is a suspension.

Third form- introducing the subdominant in third measure.

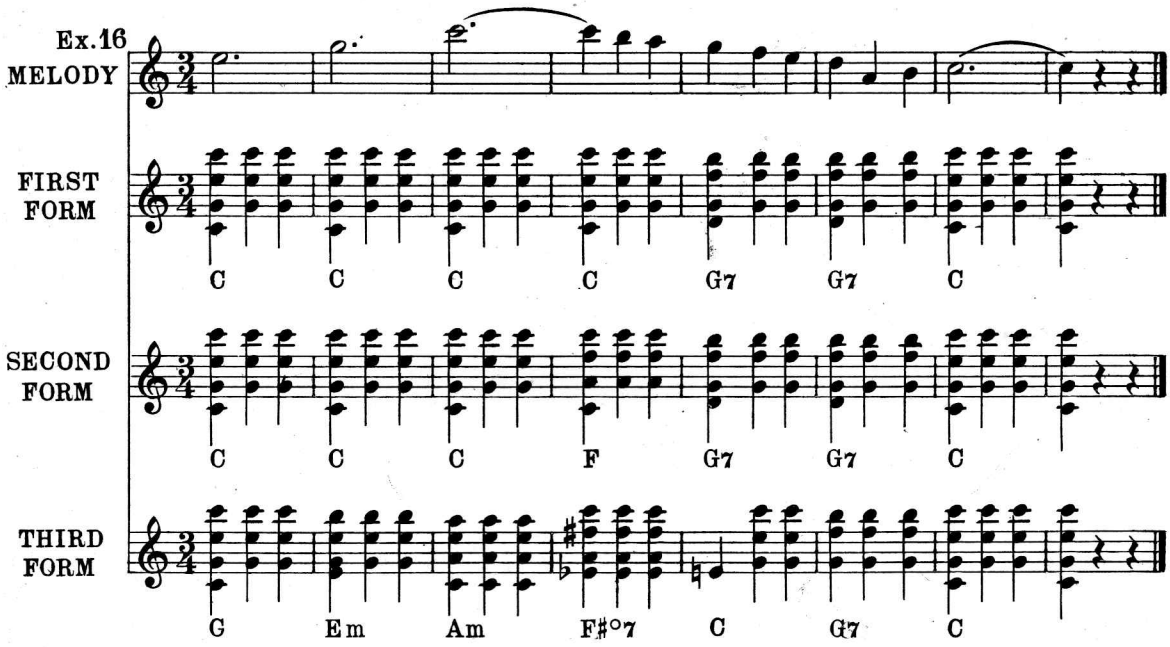
Fourth form- introducing the E minor in second measure and A major in third measure.

Fifth form- showing changes from major to minor in first and second measures.
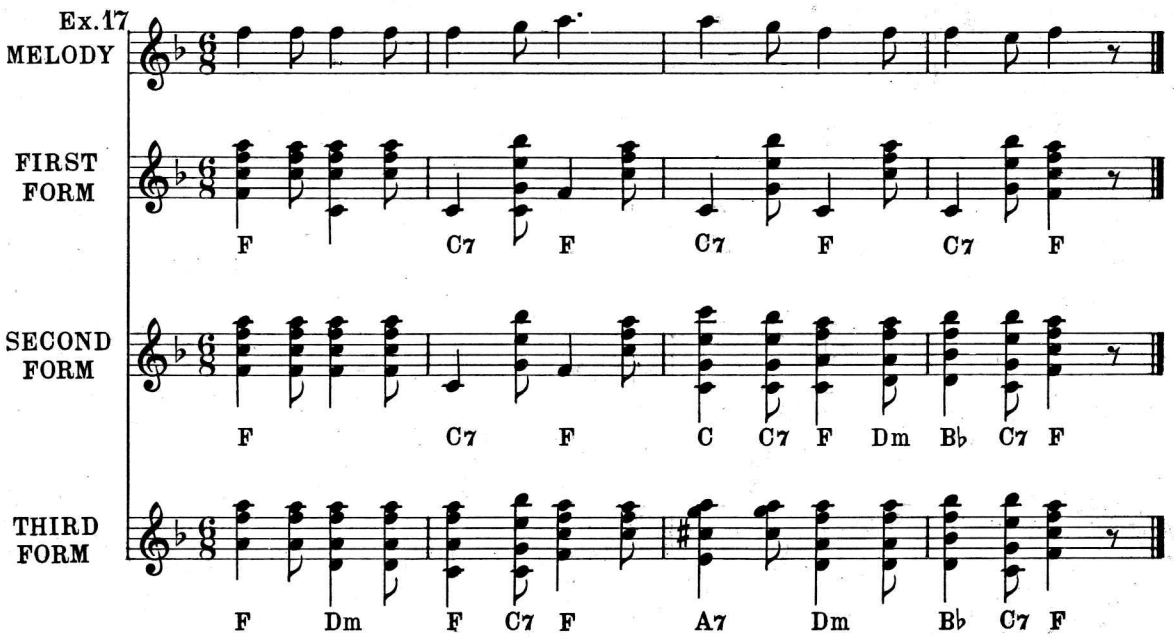


Tenor banjoists in the orchestra usually mark a piano score with letters designating the name of each chord. This plan will be used here. The F♯ diminished 7th chord in the following example is marked F♯°7.

Copy this exercise as written and then transpose to the key of G.
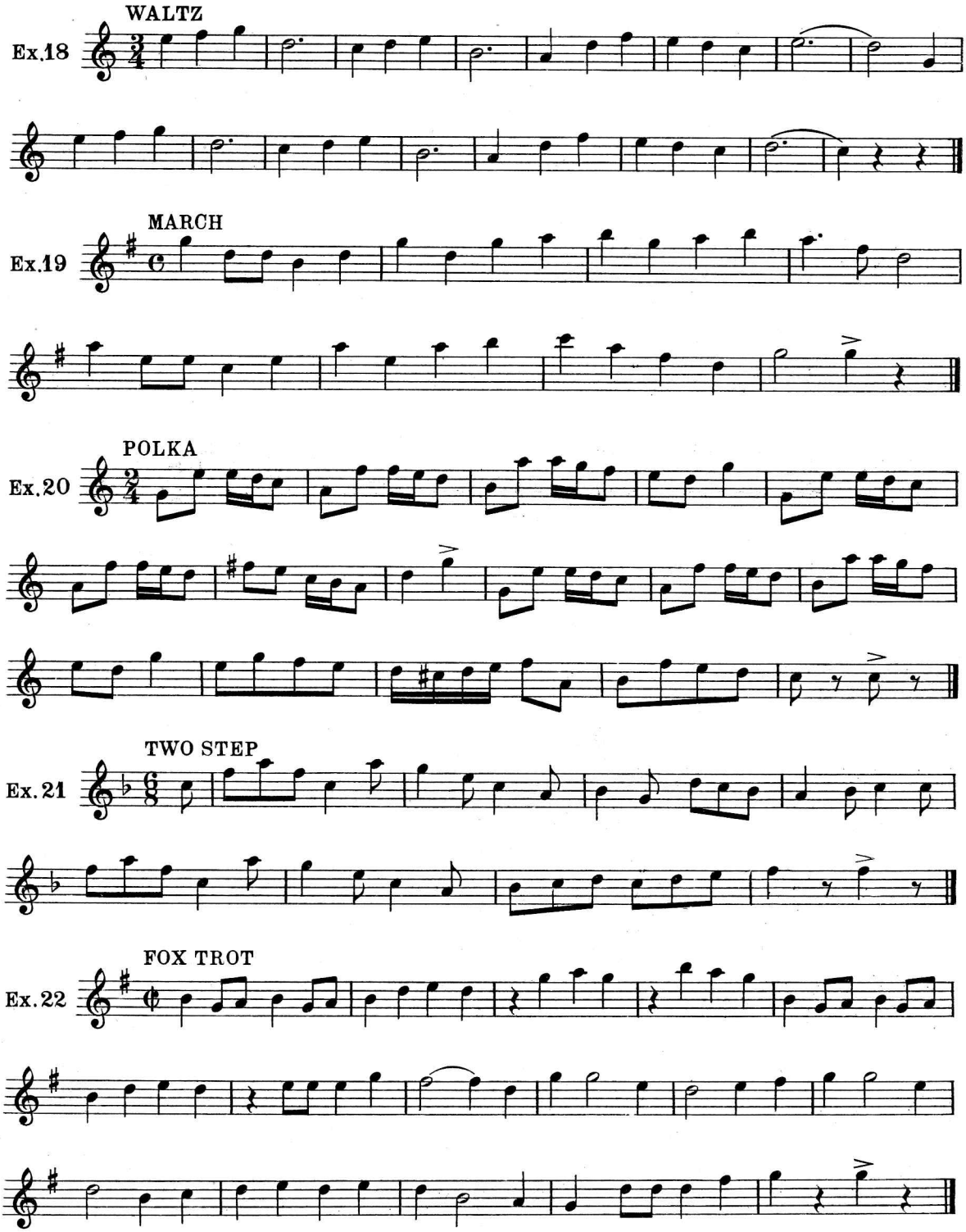


Several copies of the following chords should be written in F, and then transposed to C, after a correct copy has been written and played over.



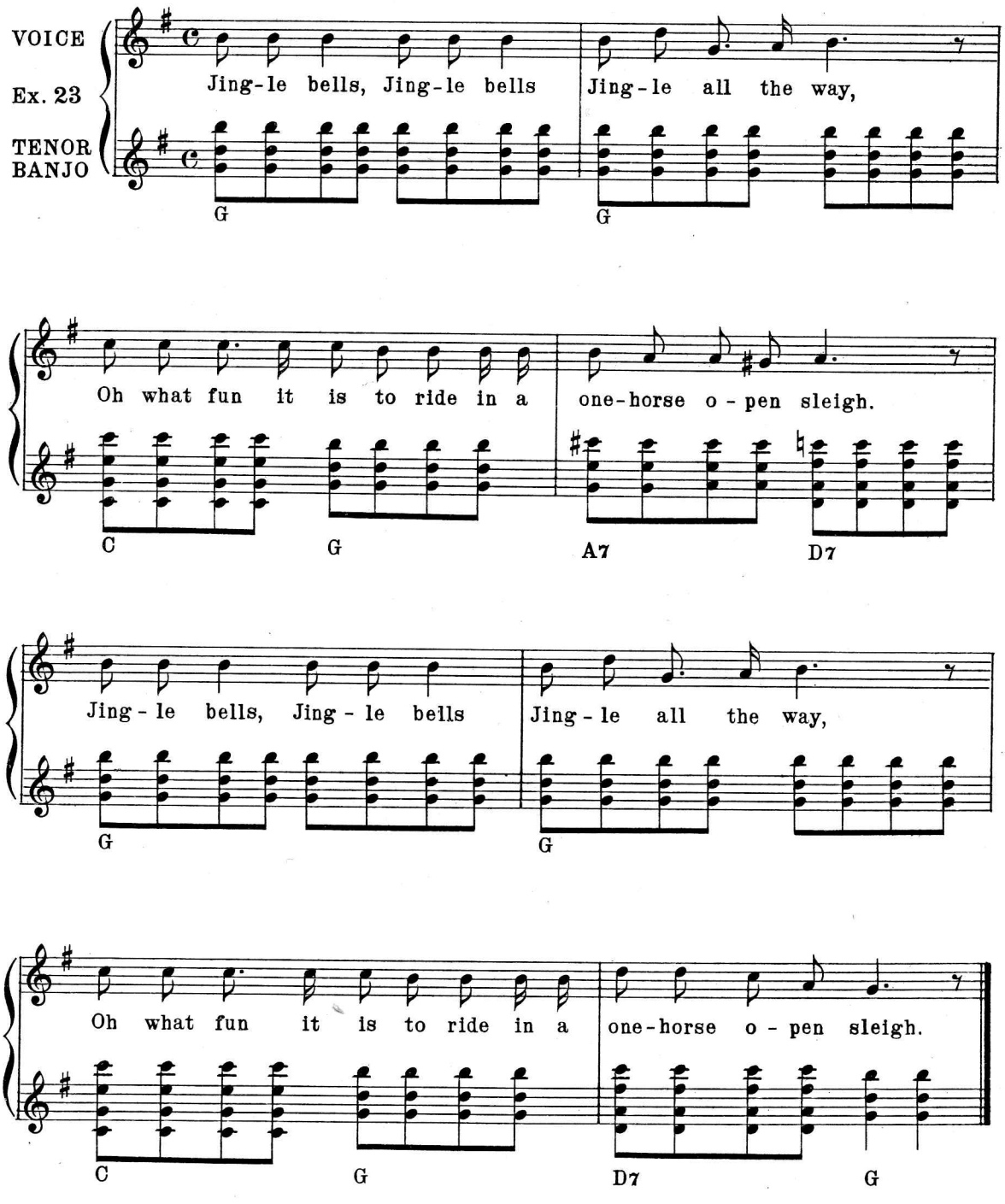
Exercises

Write a tenor banjo accompaniment for each of the following exercises.



Tenor Banjo And Voice

For playing accompaniments to vocal solos, the tenor banjo supplies a lively and brilliant background to popular ballads. Ordinary chords are the most effective, and these should be placed on both the accented and unaccented parts of the measures.
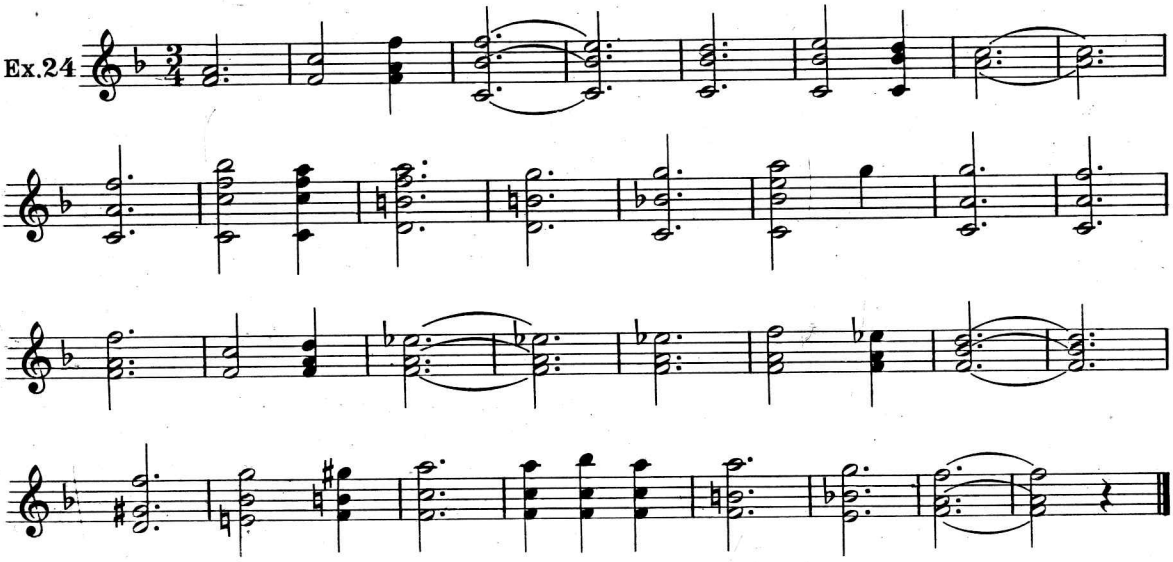


Tenor Banjo Solos

Instrumental solos for tenor banjo are generally written high, because of the brilliancy coming from notes above the 12th fret. There are, however, some beautiful affects obtained from the low register, as will be seen in the following short extract.

The Debutant

W. J. KITCHENER

Ex.24
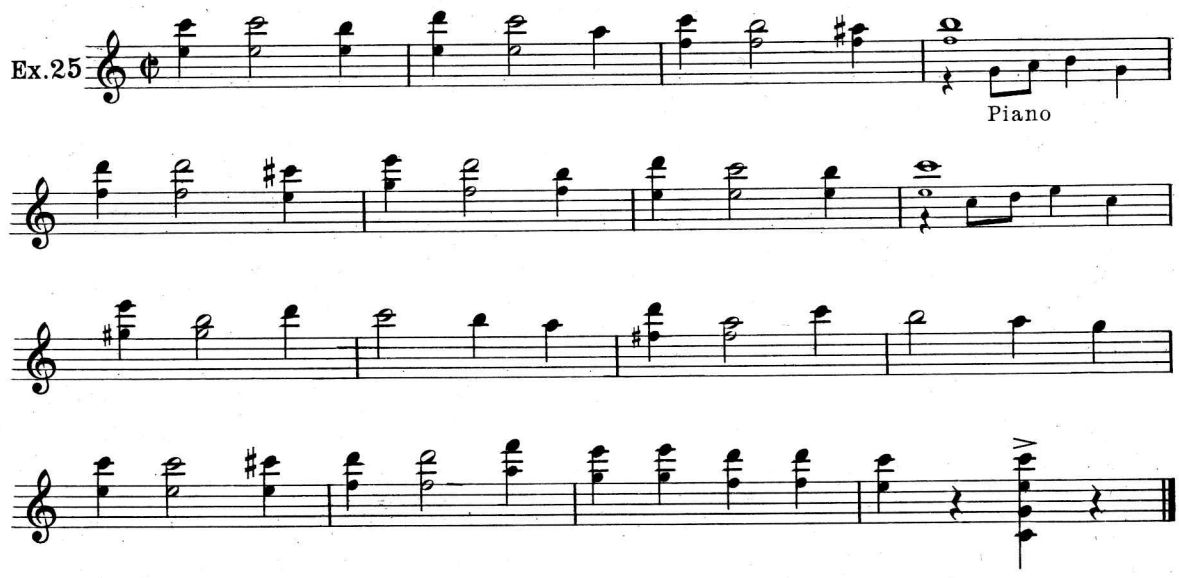


When the melody runs high it is often possible to introduce an alto which can be played ad libitum. These extra notes should be small notes.

High Gear

Fox Trot

ARMSTRONG

Ex.25



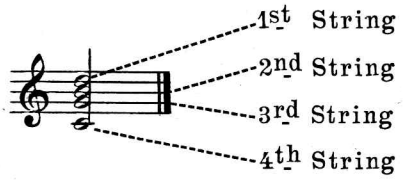
HARMONY FOR PLECTRUM BANJO

For immense power, big volume and great sustaining tones, combined with easy manipulation, the plectrum banjo is unsurpassed by any other model in the banjo group.

The prevailing character of chords being close harmony, the plectrum stroke across the strings produces an effect of compactness and stability.

Plectrum tones are an octave lower than written. The four strings are shown here, the low C being the same as C on 2nd space of bass clef.
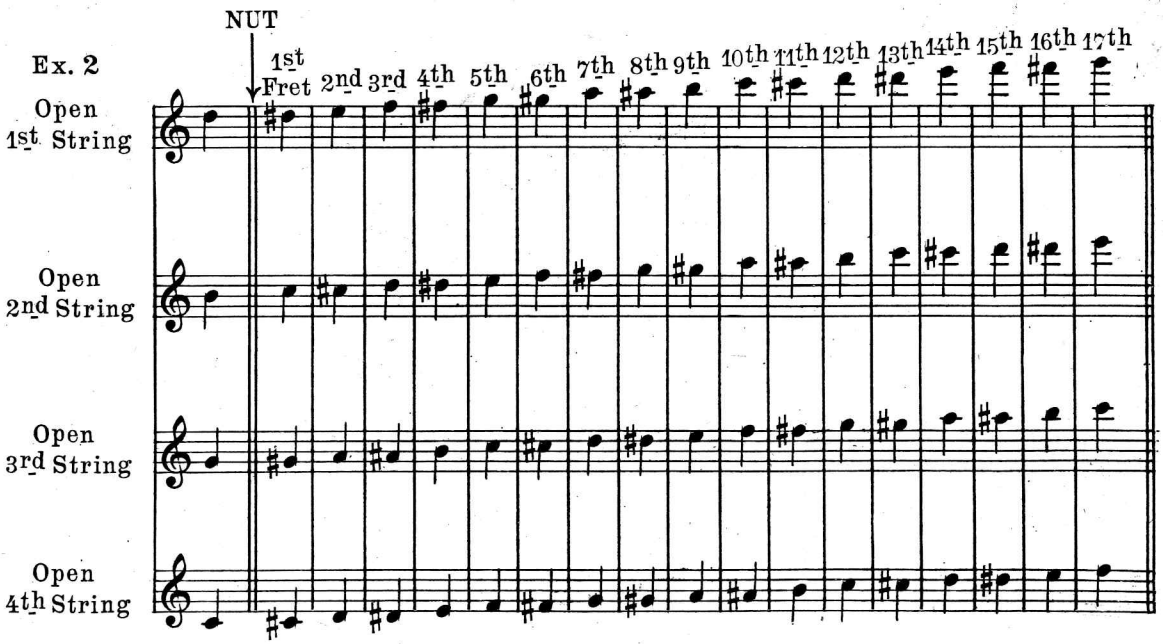
Ex. 1



A study of the plectrum banjo fingerboard shows that the three upper strings are tuned to form a major triad, thus making the left hand fingering of chords remarkably easy in all keys.

Plectrum Banjo Fingerboard

Ex. 2



Chords for Plectrum Banjo

When necessary the bass and chords can be divided or seperated in a free style of accompaniment. The general plan, however, is to give complete chords, especially for orchestra work, and as the harmony is practically in the same register as piano, the effect is often greatly improved by having the plectrum banjo take only the chords.
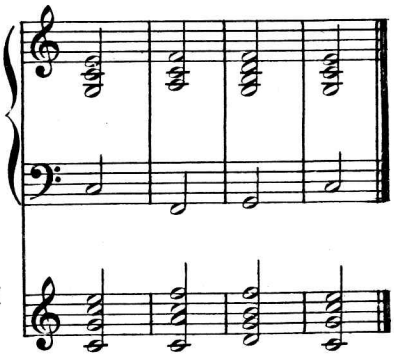
In writing accompaniments for plectrum banjo, the various notes in a chord must come on adjoining strings, as no string with an inner voice can be skipped by the plectrum. If the chord in question has three notes they must be assigned to either the three upper strings or the three lower ones. From this it will be seen that a three-voice chord must always include the two middle strings.

Chords for plectrum banjo resemble those on piano, although written an octave higher. The tonic, subdominant and dominant 7th chords of C major are shown here for piano, and the same adapted for plectrum banjo. As the banjo sounds an octave lower than written, those two instruments play in the same pitch.
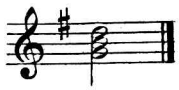
Ex. 3

PIANO

PLECTRUM BANJO



As the three upper strings are tuned to form a major triad, the G major chord, shown here, and all similar chords above, are very easy and practical.



For gaining facility in writing plectrum banjo chords, the best method is to begin with an easy song in the key of C for piano, and adapt the chords to suit the plectrum banjo. This can be quickly mastered if the following rules are observed:-

1- Write the treble clef for C and place the proper time simbols after the clef. Blank music paper should be used and the writing done with ink.

2- Observe the first bass note in the piano score along with the chord which follows in the treble staff. This chord, with the bass, will form a complete chord which must be recognized and named before attempting to arrange for your copy.

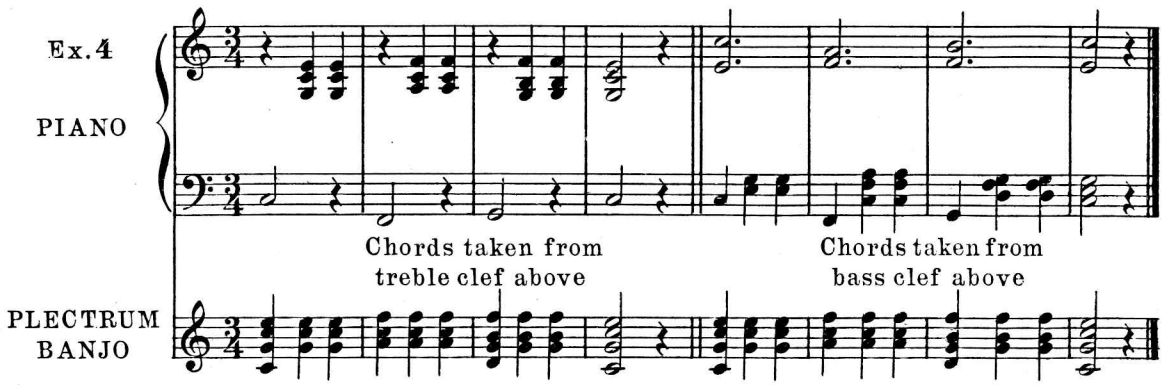
3- If this chord is C a mental picture of the C chord for plectrum banjo will come naturally, just as it ought to be placed on the banjo fingerboard.

4- Close harmony being necessary this chord of C must be assembled so that the notes become playable on the banjo fingerboard, and the same attention must be given to all other chords.
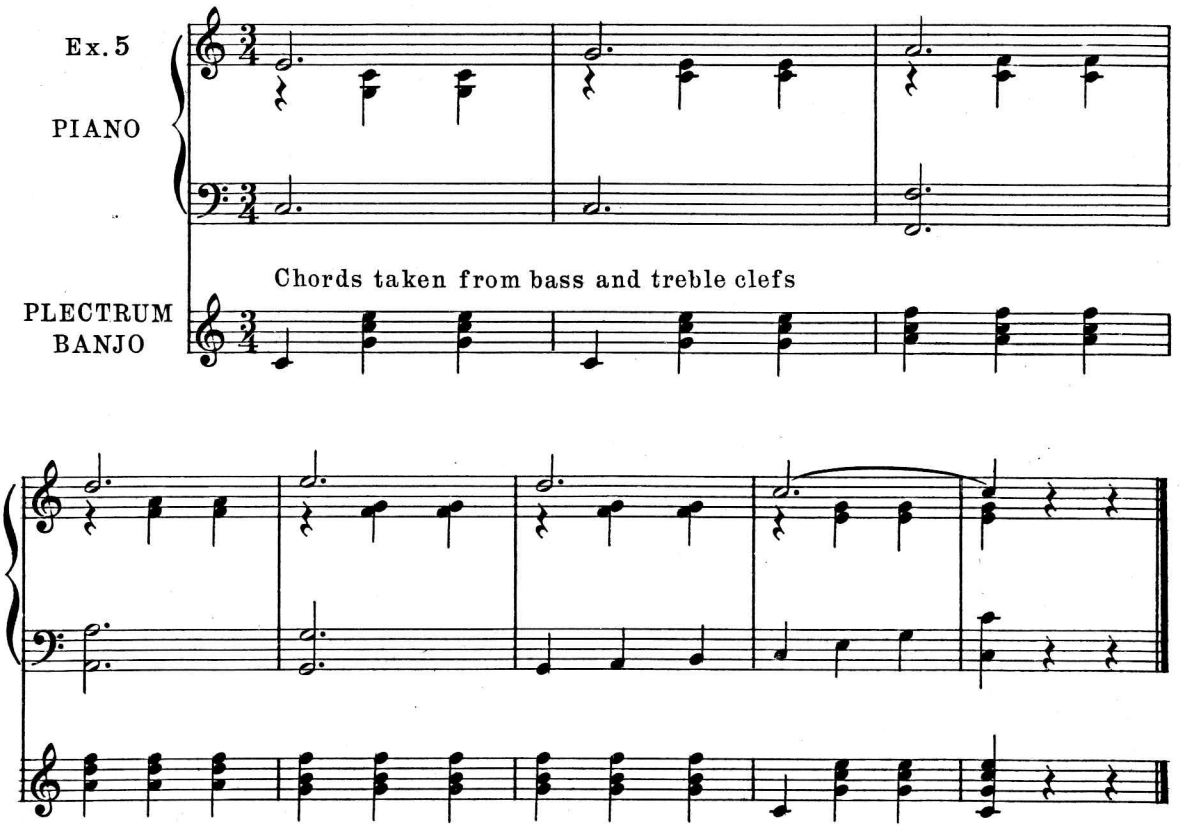
When the notes of a piano chord are so placed that the intervals are not practical for banjo, these intervals must be inverted to bring them within range of the player's fingers. Frequently a piano accompaniment is written in open harmony throughout its entire length; a form quite impossible for plectrum banjo. When this occurs adjust the chords so that they fit the banjo fingerboard.

In adapting piano chords for plectrum banjo the chief point is the ability to recognize and name the piano chord at sight, before transfering the notes to plectrum banjo. When both bass and chord are in the bass clef for piano, the task becomes more difficult, but with a little practice it can soon be mastered.

Copy the following plectrum banjo part in the key of C, and compare each chord, as you write it, with the piano score.
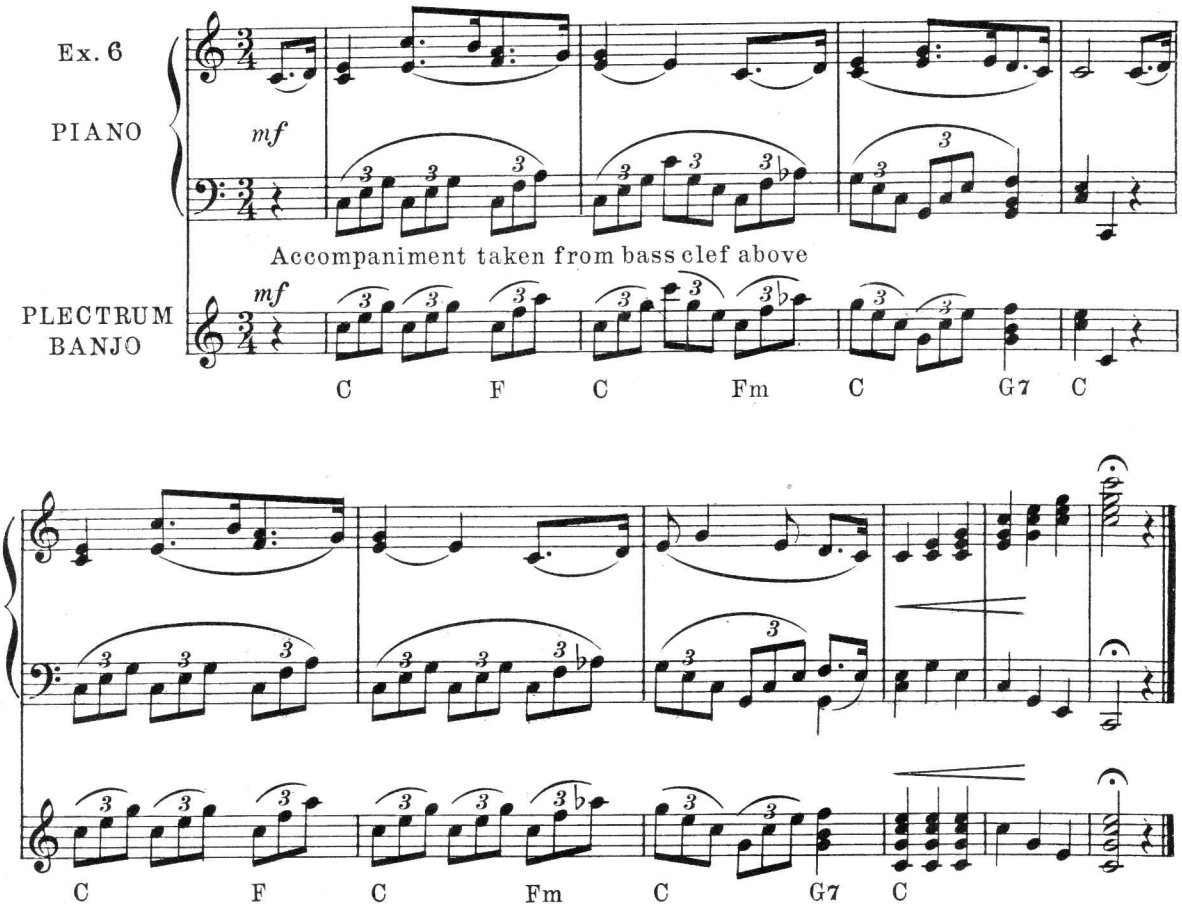


When the harmony for piano is divided, as shown in the following example, the notes for plectrum banjo chords must be taken from both treble and bass clefs.
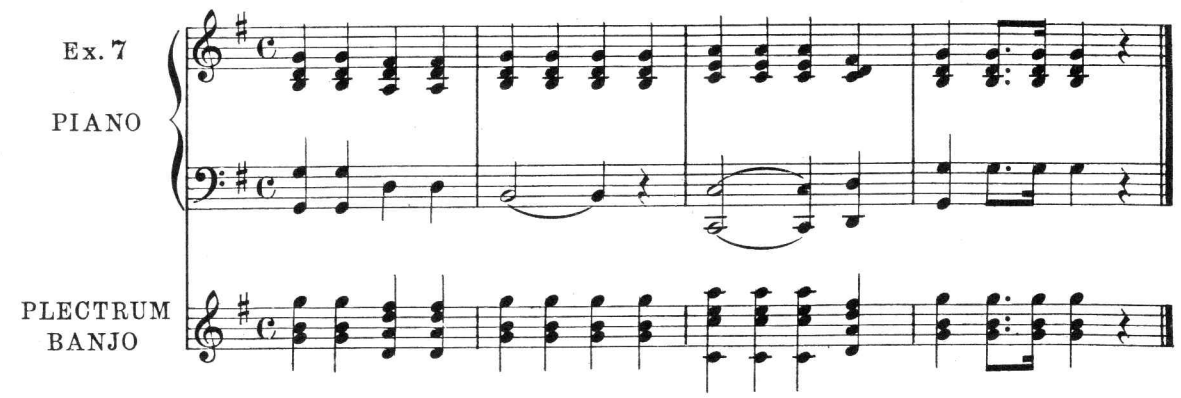


When the piano accompaniment runs in arpeggio form, it is possible to secure the same effect on a plectrum banjo.

Always end an accompaniment with the tonic chord, and make a special effort to have the lowest note of that final chord the root of the tonic.



Full chords in a piano score may be duplicated with excellent results on a plectrum banjo.

Copy these exercises on blank music paper, and compare each banjo chord, as you write it, with the piano accompaniment.



Transposition Of Keys

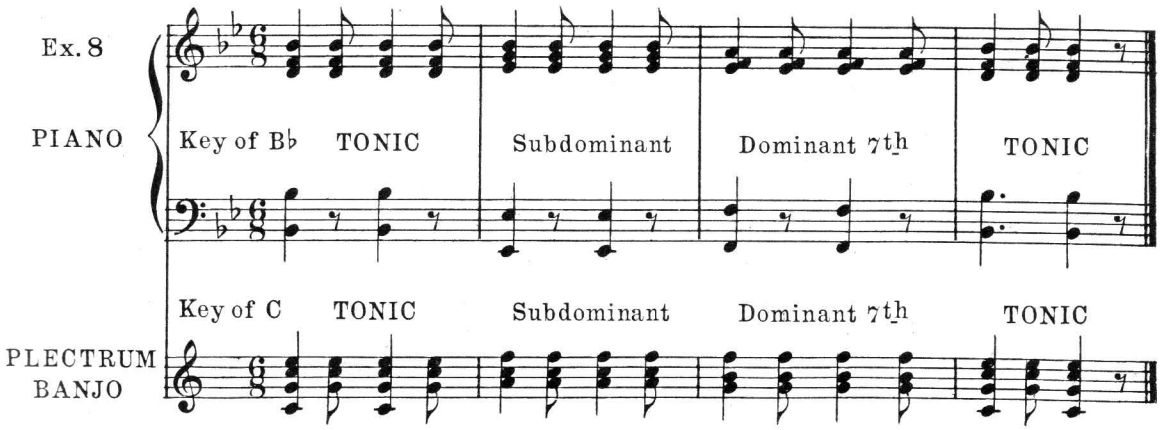
When a composition runs too high or too low for the vocal range it is often necessary to change the key. If the piano accompaniment, for example, is in the key of B-flat, and the vocalist wishes to sing in C, the accompaniment for plectrum banjo must be written in C; in other words it must be transposed. For a detailed explanation of transposition see Part 1, Chapter 1.

In transposing a plectrum banjo accompaniment from a piano score, the first thing is to write the proper signature for the new key on a single staff in the treble clef, and place the correct time symbols. The next point is to find how much higher or lower this new key is from the old one. If the piano key is B-flat and you wish the banjo to be in C, we find that C is a major second higher than B-flat. This interval, a major second, becomes an infallible guide for writing the plectrum banjo chords - - for if the piano chord is B-flat, the banjo chord must be C, a major second higher than B-flat. In the same way all other chords in the piano part, must be placed a major second higher for plectrum banjo. The E-flat chord for piano becomes an F chord for banjo, the F chord must be a G chord, and so on.

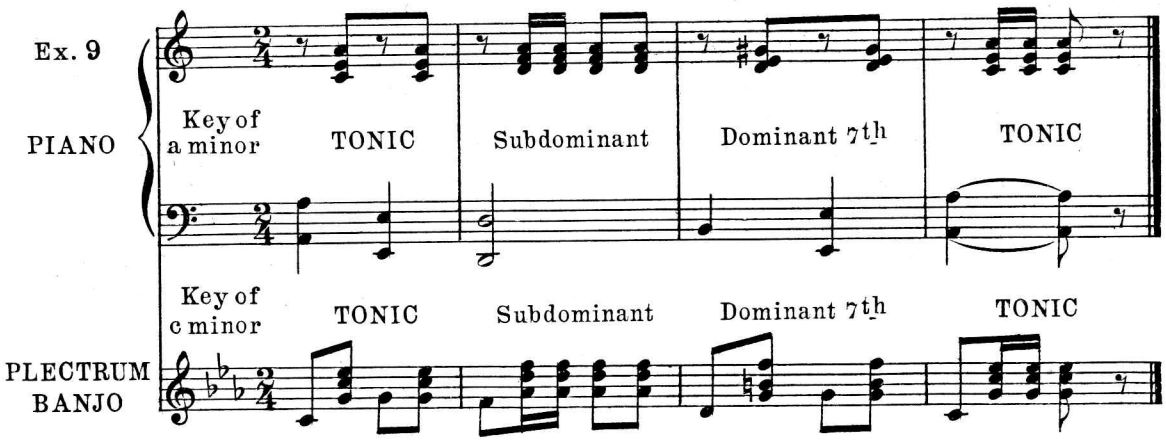
The whole secret of transposing an accompaniment rests on the quick recognition of a chord in the old key, and the mental operation of changing that chord to fit the new. If this method is adopted there will be no need of slowly picking out individual notes of a chord, one at a time, and tediously joining them together in another key. Think of the chord at once, as a complete chord, and the various notes can be assembled quite readily to fit the banjo fingerboard. If the studies and exercise in Part 1 of this treatise have been carefully worked out, the immediate recognition of a chord becomes a very simple operation.

In conjunction with the instant recognition of any chord to be transposed, it is a tremendous advantage to know and be conscious of the chord's importance in the old key, so that when transposed into the new key its value is the same. If the chord is the tonic it must be, when transposed, the tonic of the new key; if the dominant 7th it must be dominant 7th of the new key, etc.
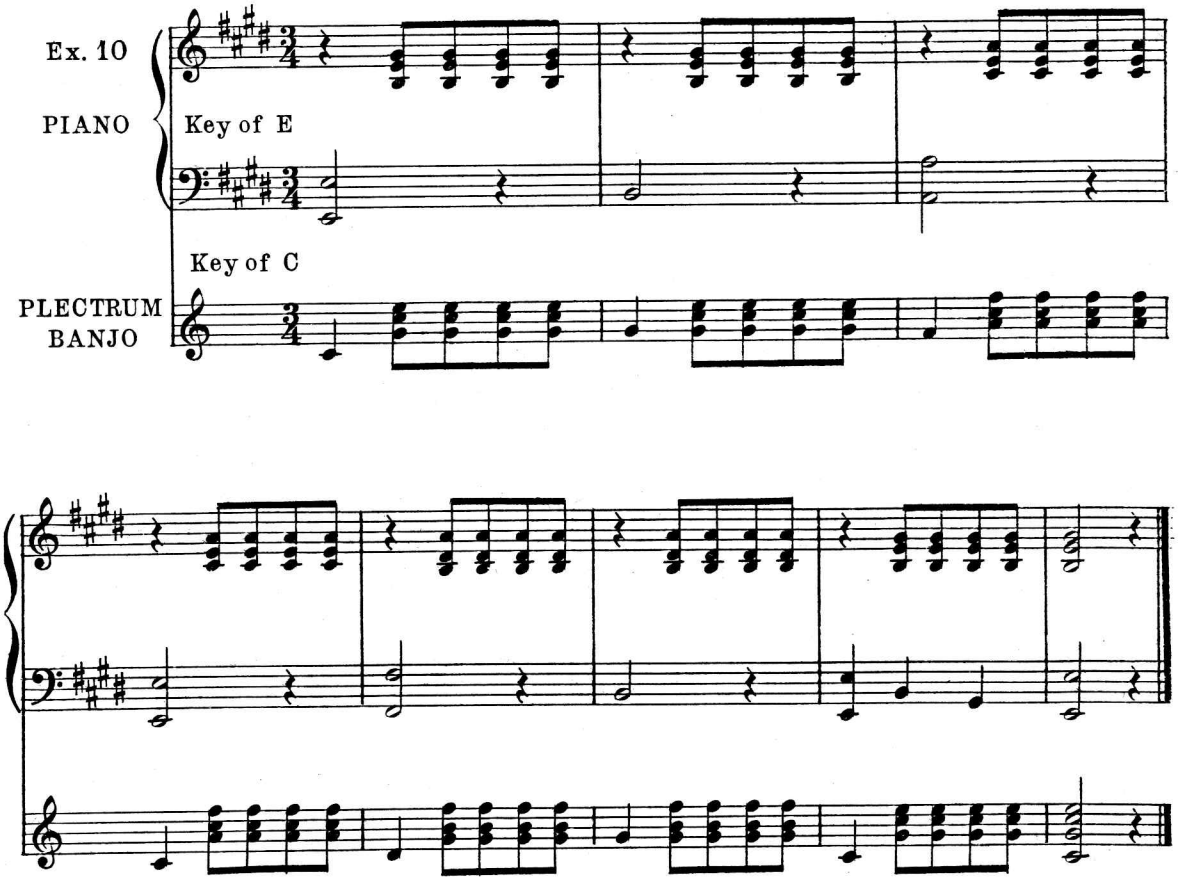
Write the following plectrum banjo chords and observe how their relative importance, when transposed, remains the same.



When the piano accompaniment runs in A minor and you wish to play it in C minor, the banjo chords must be transposed a minor third higher.
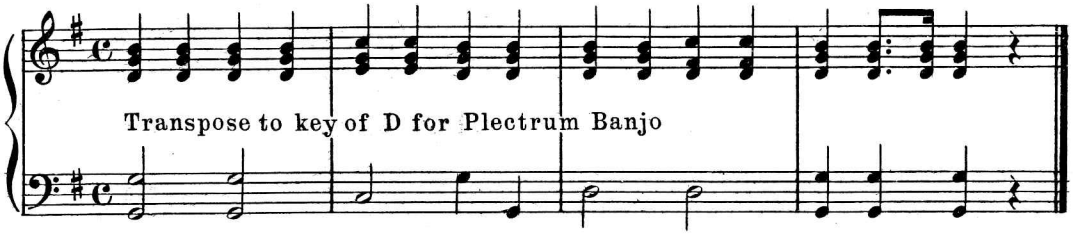


If the piano is in the key of E and you want to play in C, the banjo accompaniment must be transposed a major third lower.
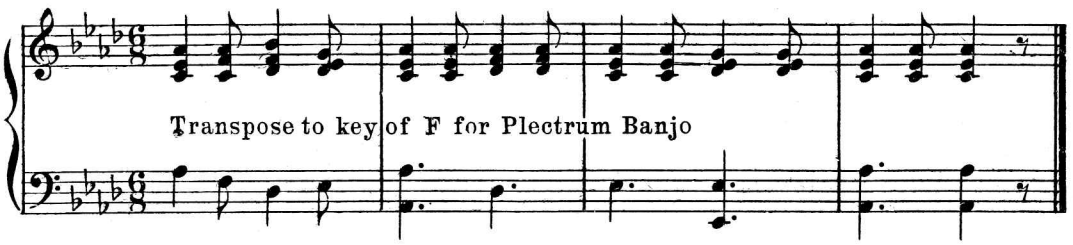


Exercises

Transpose the following piano accompaniments into the different keys marked for plectrum banjo. Write all exercises in ink on blank music paper.
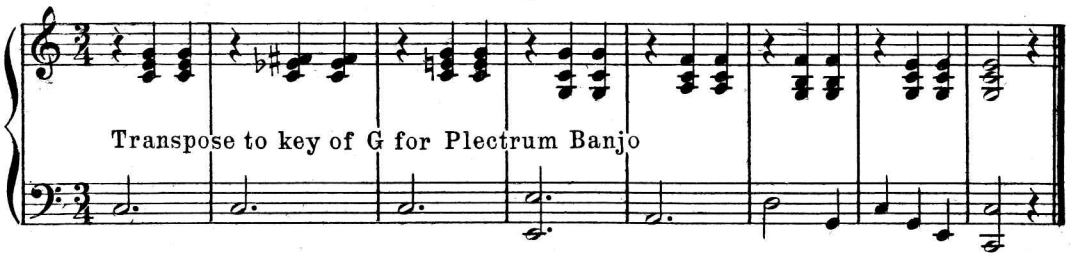
Ex.11
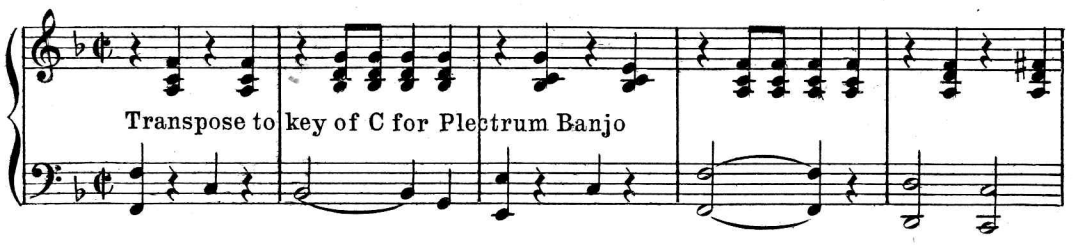


Ex.12
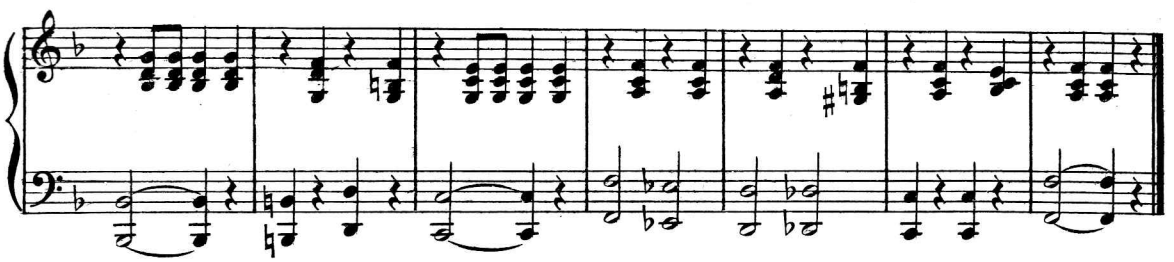


Ex.13



Ex.14





Harmonizing Melodies

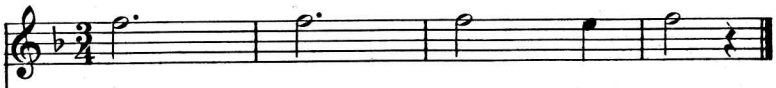
When a melody alone is given, for which the necessary chords are to be supplied, it becomes a more difficult task than transposing, because these chords must harmonize the melody. The important degrees of the scale on which to form chords was explained in the previous section for tenor banjo, and applies here to the plectrum banjo.

Very often a melody can be harmonized several different ways, each form presenting a new form in the harmonic progression which presents a changed background for the melody. The waltz melody shown here is harmonized six different ways, and any one of them, taken alone, would be acceptable. It is this element of choice which makes the harmonizing of a melody so attractive, and adds interest to the exercises.
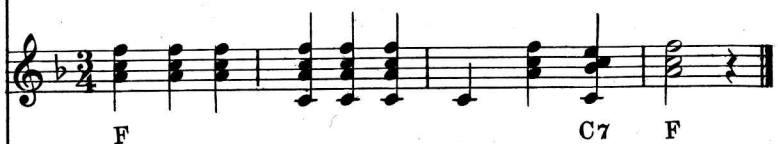
In some keys on the plectrum banjo the final chord on the tonic must have its third, as the lowest note, instead of the root. This is not as good as the root but it is better than having the fifth for the lowest note.

Ex. 15

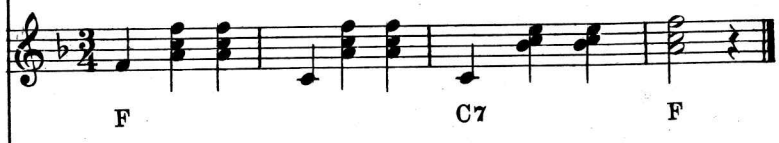
MELODY to be harmonized.
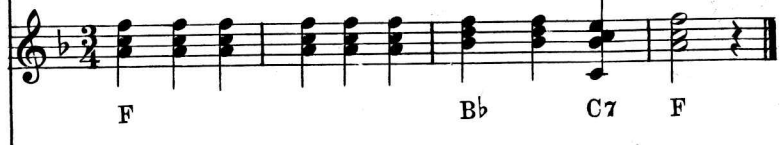


PLECTRUM BANJO CHORDS
First form using the tonic and dominant 7th chords.
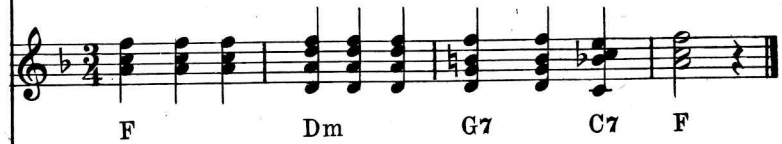


Second form - the high F in third measure is a suspension.
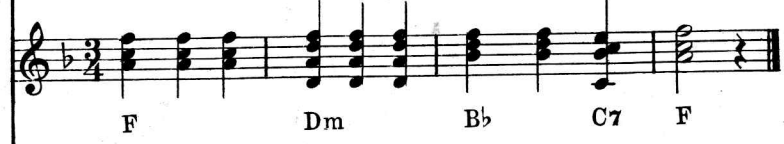


Third form introducing sub-dominant in third measure.
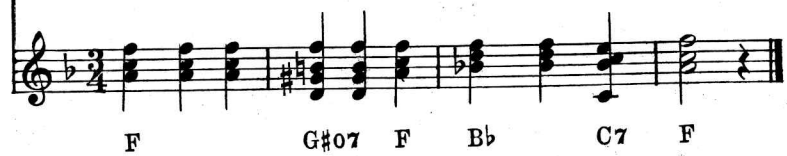


Fourth form - introducing D minor and G dominant 7th chords.



Fifth form - note the difference between this and third form.
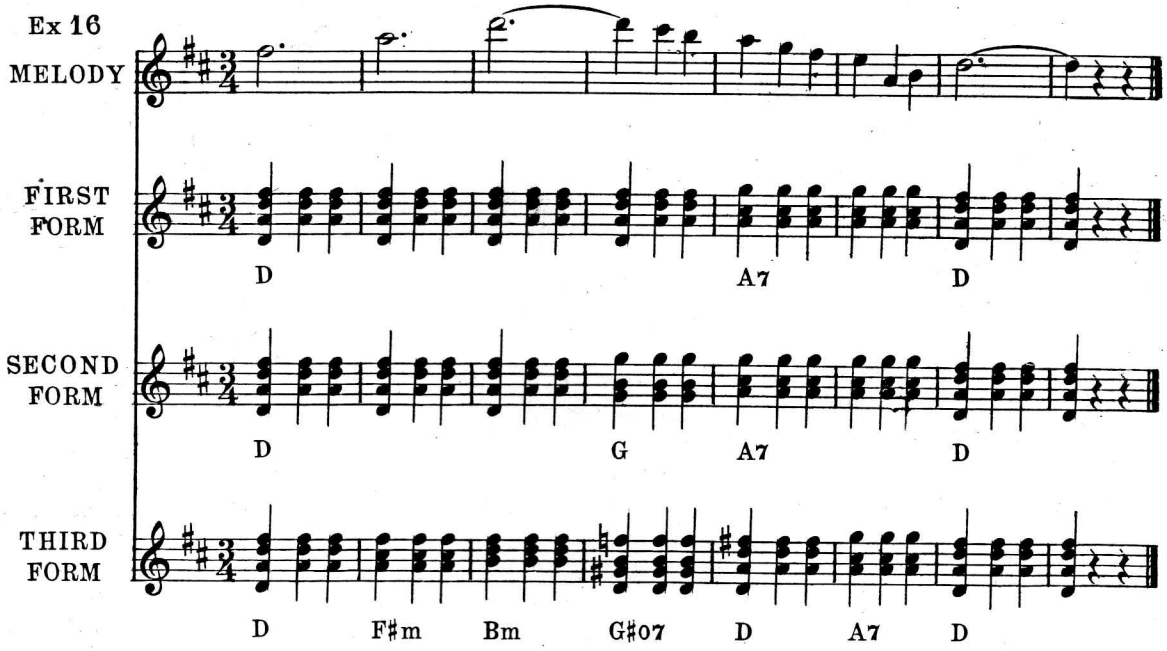


Sixth form - introducing G♯07 in second measure.



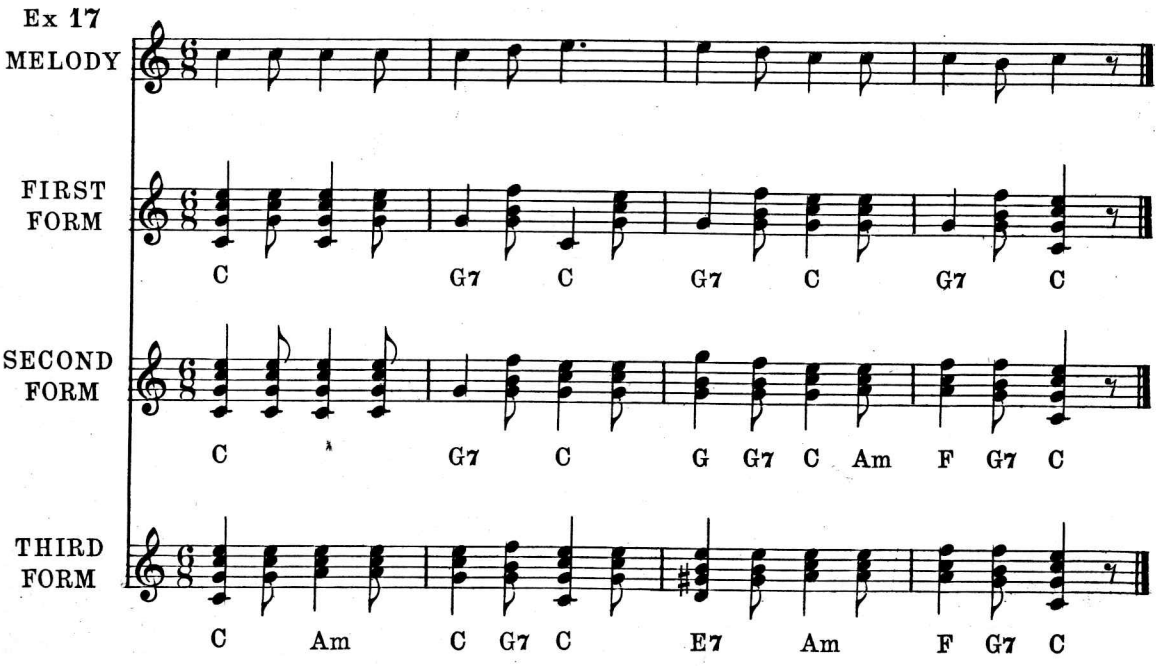
The diminished 7th chord in the last arrangement of the following waltz is marked thus G♯07. Orchestra performers mark piano copies with the names of chords, and this method will be used here. Copy this exercise as written and then transpose to the key of F.

Ex 16



Compare the harmony in each of the following arrangements and observe the changes as you write them on paper.

Ex 17
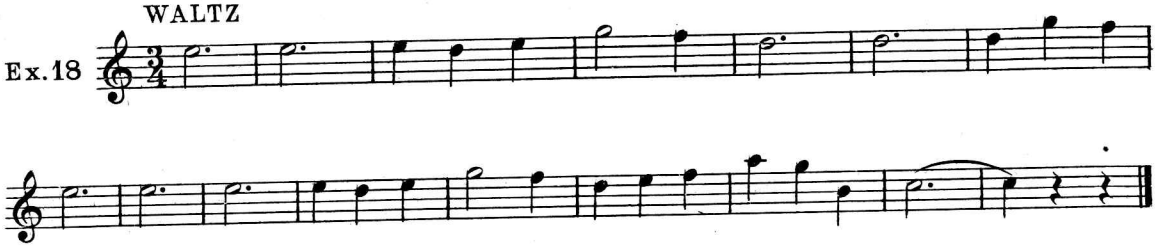


Exercises

Write a plectrum banjo accompaniment for each of the following exercises.
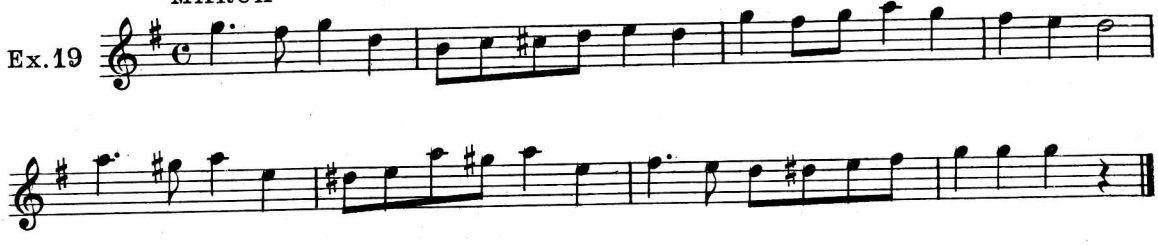
WALTZ

Ex. 18
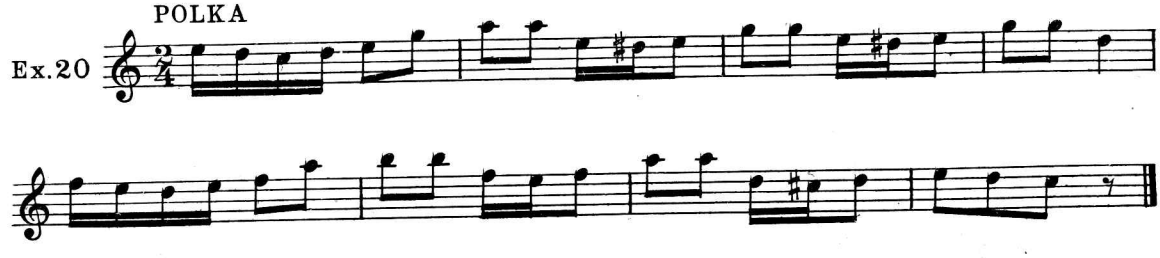


MARCH

Ex. 19
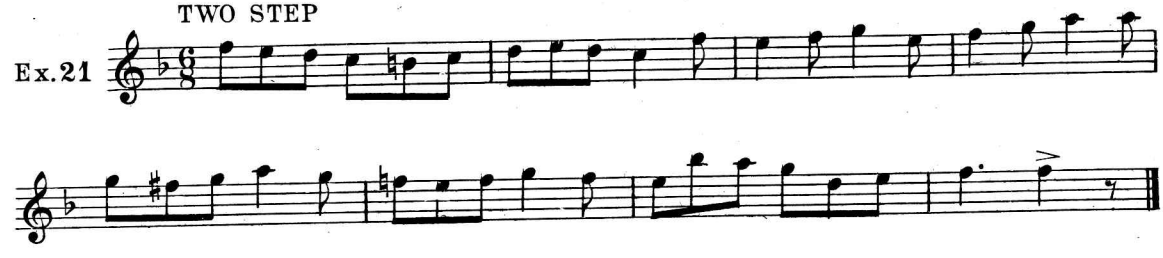


POLKA

Ex. 20
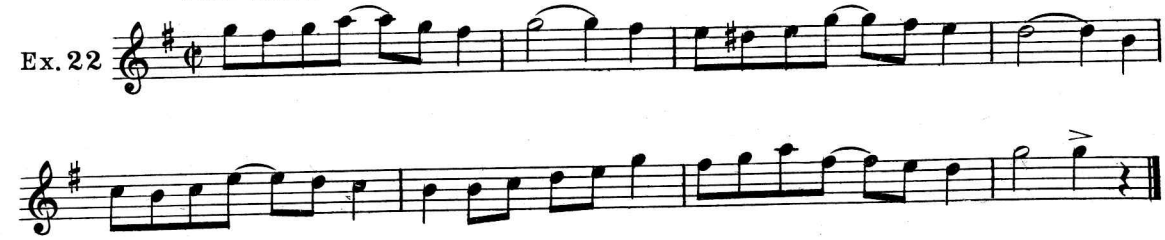


TWO STEP

Ex. 21



FOX TROT

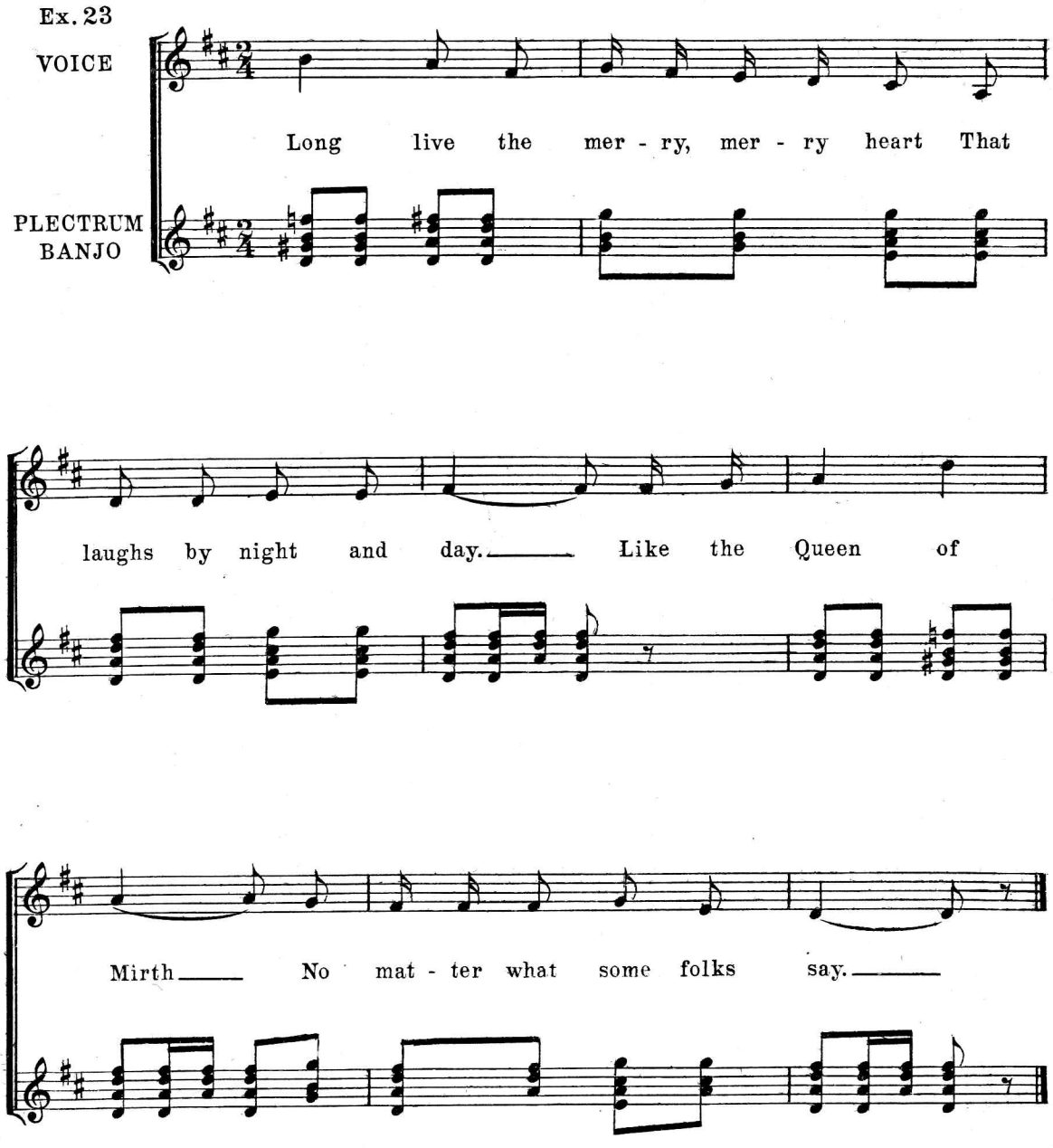
Ex. 22



Plectrum Banjo and Voice

In playing accompaniments for vocal selections the plectrum banjo gives a lively and brilliant setting to popular ballads. Ordinary chords are the most effective, and these should be placed on both the accented and unaccented parts of the measure.

Ex. 23
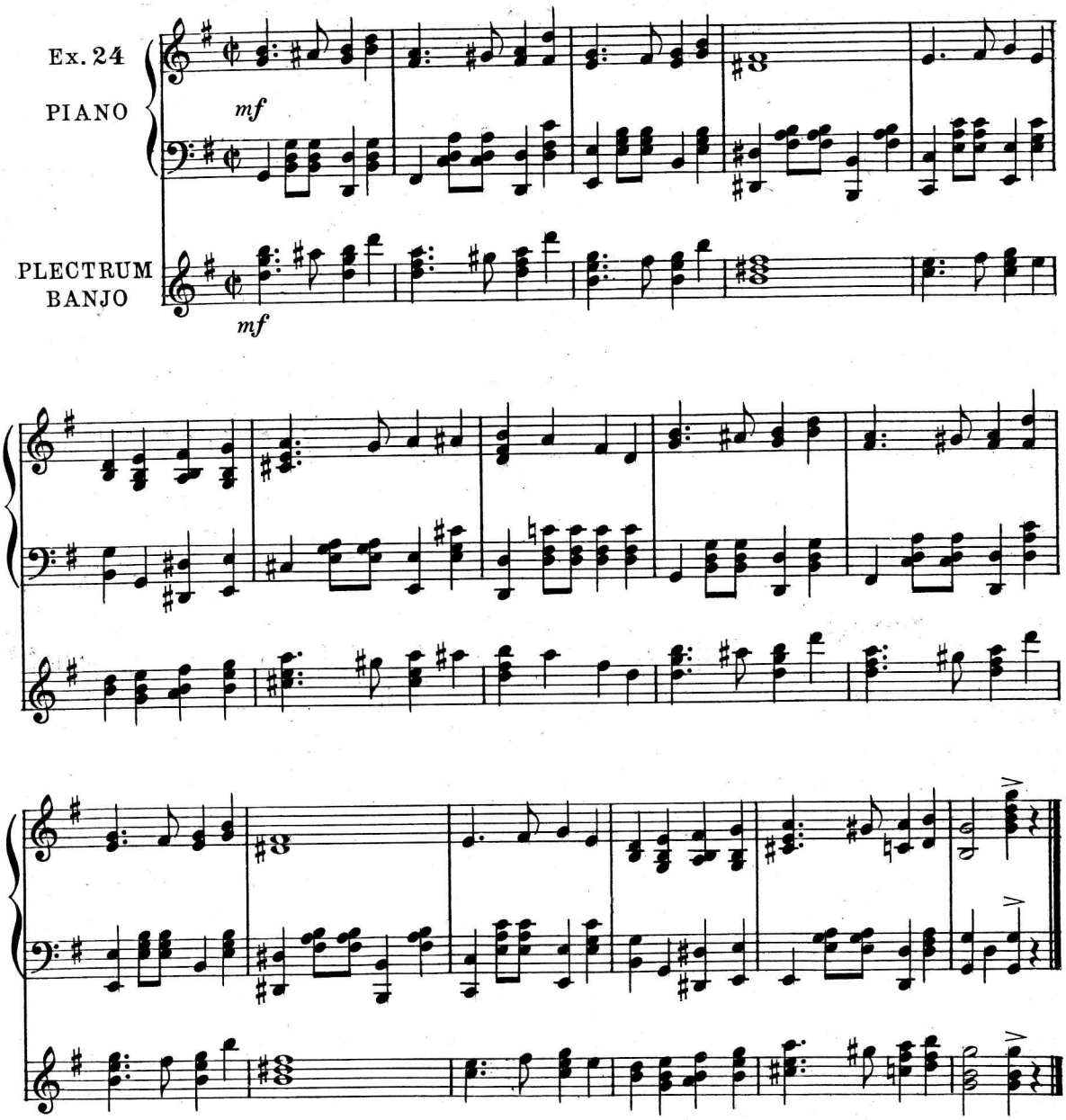


Plectrum Banjo Solos

In arranging a plectrum banjo solo from a piano score, it is often necessary to place the melody an octave higher than piano. Write the melody notes first before adding the harmony that can be conveniently played with them on a banjo fingerboard. The effect is very much improved if these chords in the harmony come on the accented parts of the measure.

Copy this exercise and observe where the chords are introduced.

Times Square

Wm J. SMITH
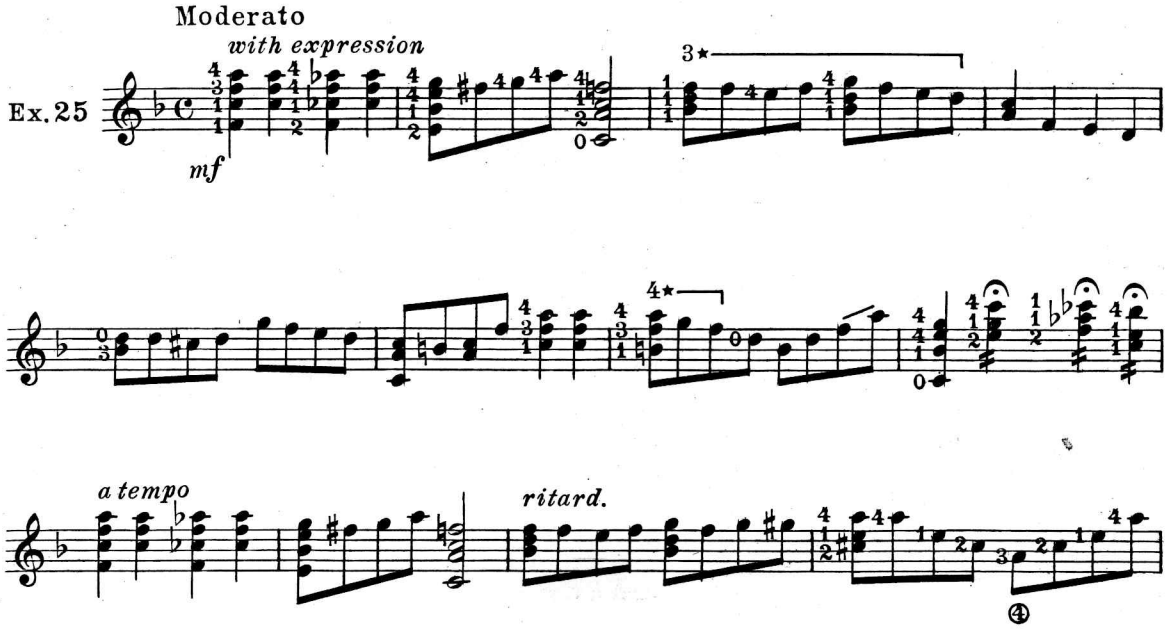


Instrumental solos for plectrum banjo are very forcible when they contain full chords. The two selections given below illustrate the effective use of appropriate chords.

Romance
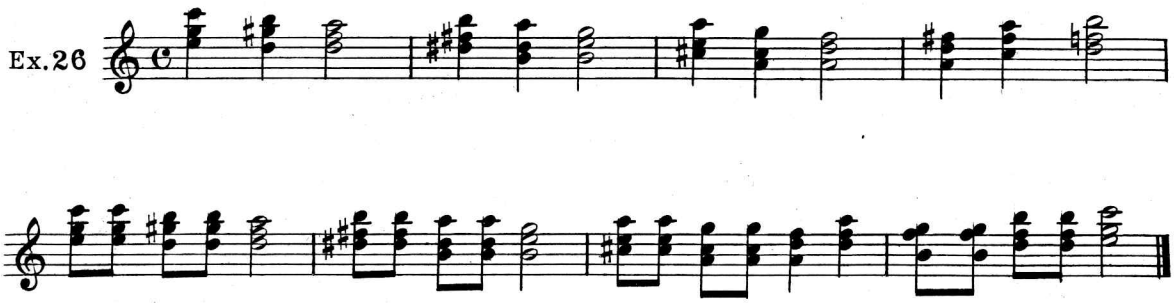
Banjo Solo

A. D. GROVER

Ex. 25



Ex. 26
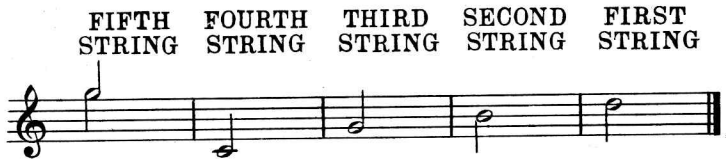


HARMONY FOR STANDARD BANJO

(FIVE-STRING MODEL)

Left hand fingering on the standard banjo being similar to that on the plectrum model, all the preceding examples and exercises for stroke playing are applicable here.

The 1st, 2nd, 3rd and 4th strings on each instrument are the same, while the standard model has an extra string tuned to high G, as shown here.

Ex. 1



The fifth string gives a characteristic touch so much admired in a banjo. Notes to be played on this short string are identified quickly when they have an extra stem attached, but it must be borne in mind that this extra stem must conform to the real value of the note. If the note on the fifth string is a quarter note the extra stem alone, without hook, is attached, if the note is a sixteenth the extra stem has two hooks, and if the note is an eighth the extra stem has but one hook.
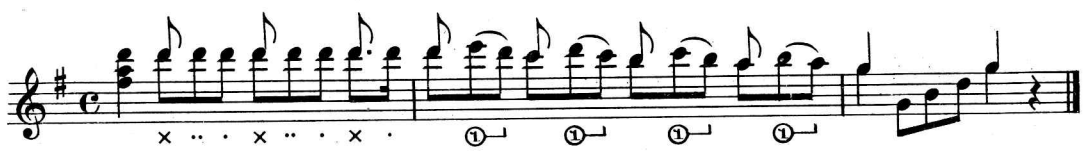
An example of the proper marking of the extra stem for fifth string notes is given here.

Ex. 2



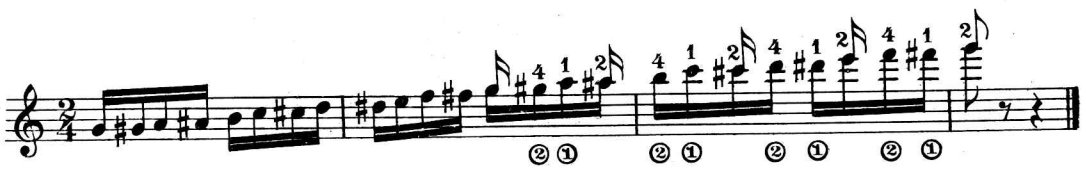
Closed notes on the fifth string are practical and extremely valuable in the execution of modern banjo music. In such cases the extra stem is imperative as a guide for intelligent fingering. The following extract has extra stems to be played as closed notes on the short string.

Ex. 3



A chromatic run in the upper octaves, can be rendered with ease and dispatch by employing closed notes on the fifth string. The following chromatic scale requires but four shifts of the left hand.

Ex. 4
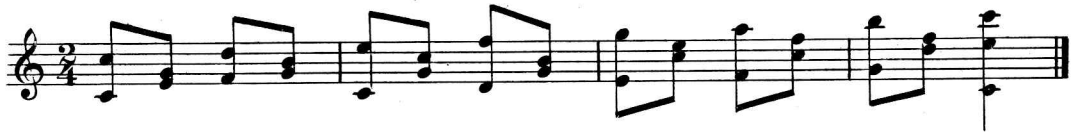


Chords For Standard Banjo

The general form of chords for the regular banjo is the same as plectrum chords, and all exercises in the previous section can be applied here.

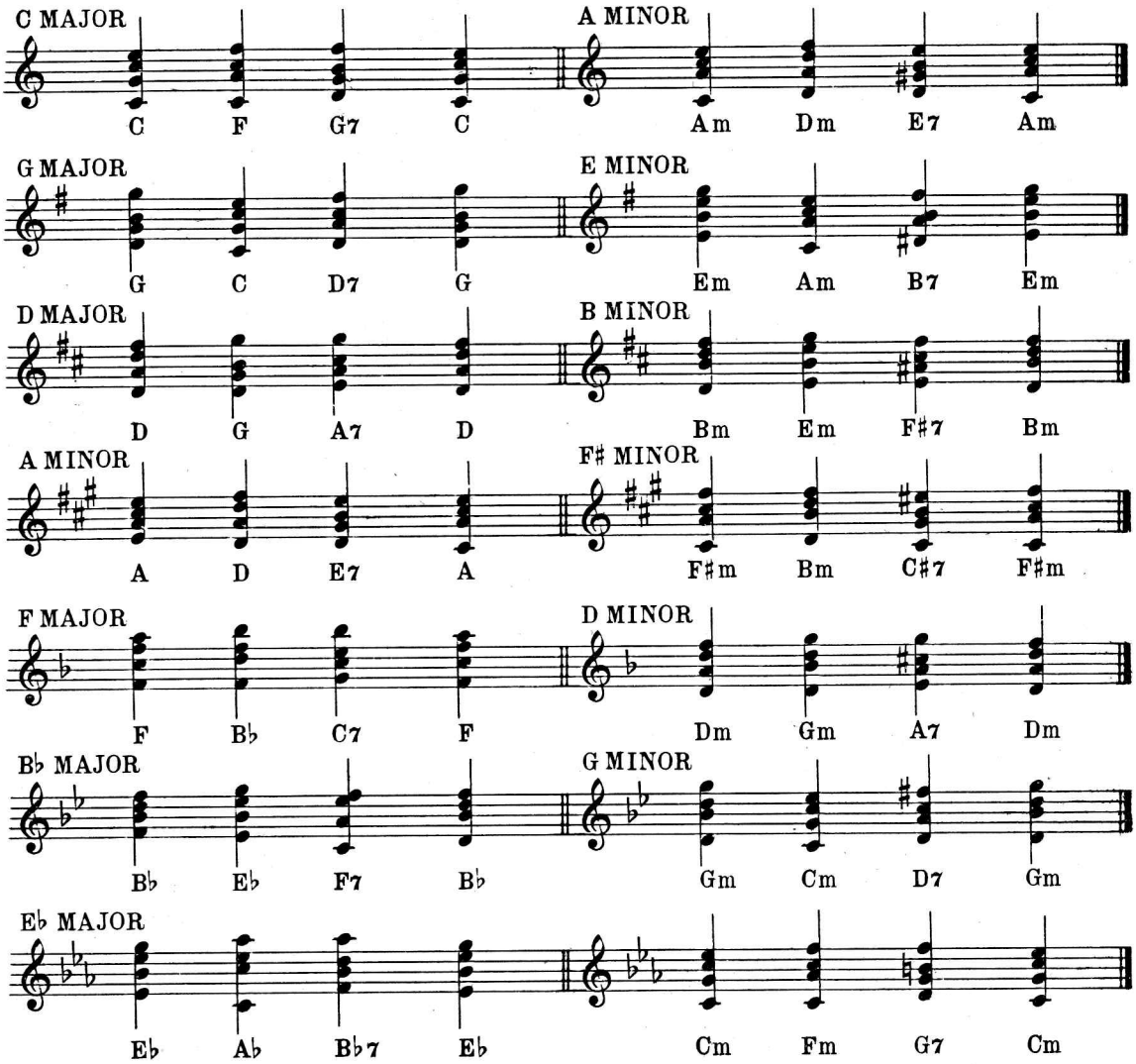
In addition to this similarity, the finger style used on the standard model, enables the player to skip or omit an inner string in any combination, thus giving him the choice of open or closed harmony. The following sample containing bass and soprano moving in thirds is quite easy.

Ex. 5
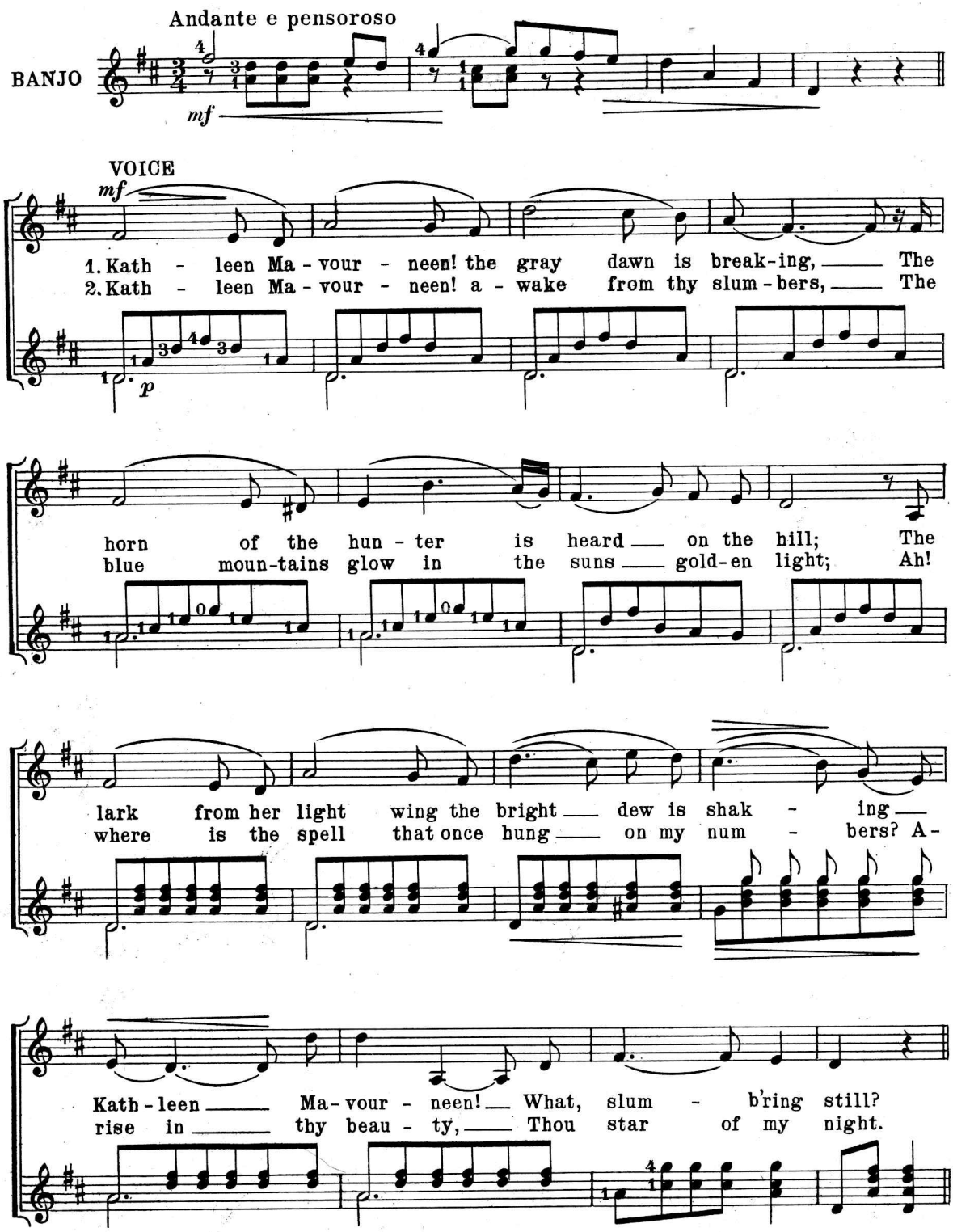


Other chords for banjo can be treated like the above when certain effects are desired, or when it is necessary to play arpeggio. The omission of any note in the following chords may occur without introducing difficult fingering.

Ex. 6



Kathleen Mavourneen
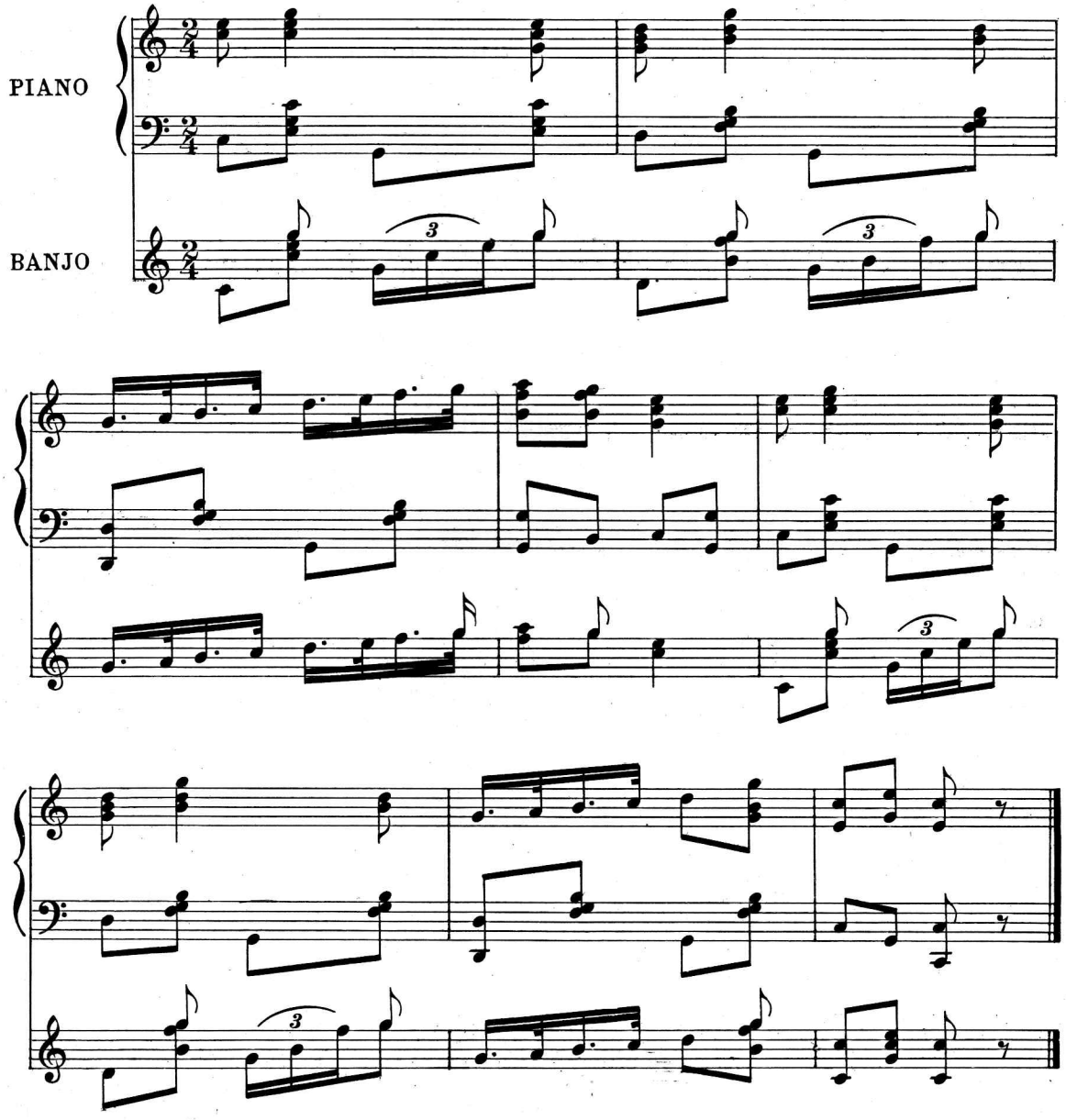


Banjo Solos

In arranging a banjo solo from a piano score, a pleasing effect is often gained by the introduction of arpeggios or "fill-ins," placed on the unaccented parts of a measure These additions generally take the form of triplets, a style which brings out the true ring of banjo music.

Copy the following banjo part and observe the embellishments introduced.

Banjo Dance
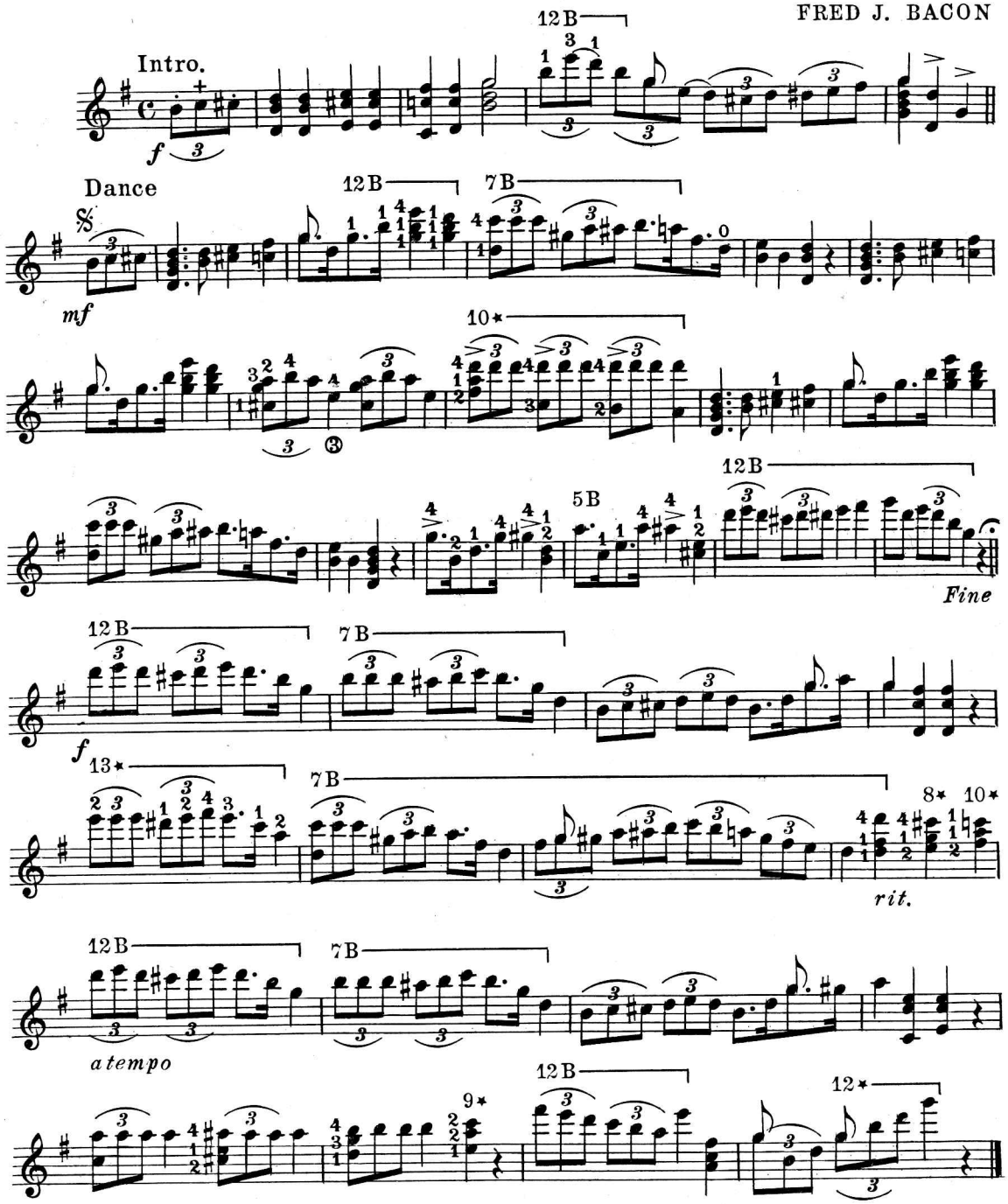
F. C. BRADBURY



Banjo tones above the 12th fret are extremely brilliant and penetrating. The modern tendency is to utilize these upper tones for solo playing in preference to the lower register. Left hand fingering from the 12th fret up to the 24th fret is a duplication of fingering in the lower compass, and for that reason high notes, on a standard banjo, are not difficult.

Dance Magnetic

FRED J. BACON

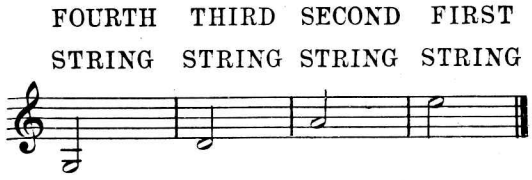


HARMONY FOR MANDOLIN

The mandolin has eight strings, or to speak more exactly, four double strings. Each double string being a pair of wire strings tuned in unison, it is generally spoken of as one string.

This instrument is tuned similar to the violin as shown here, and the notes produced are actual pitch.

Ex. 1



In a general way it may be said that writing parts for mandolin offers no serious difficulties as long as the arranger keeps within its compass, but a knowledge of the theory of positions on the fingerboard will enable him to write with more freedom. Double stops or "chords" introduced during a selection demands some acquaintance with the fingering.

Chords of two, three or four notes can, with some exceptions, be played upon the mandolin, but there are some impossible combinations, besides others that are too difficult for use in the orchestra.

The prevailing character of chords on the mandolin is open harmony throughout the entire fingerboard.
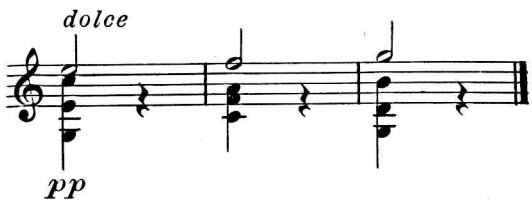
Chords of two notes are well suited for melodic figures, for sustained phrases either forte or piano, and for accompaniments of all kinds.

Chords of three or four notes produce, on the contrary, rather a bad effect when played softly except for arpeggio. They seem rich and energetic only when played loud and boldly.

It is, of course, possible to play a chord of four notes softly, but the average player will most likely spoil the effect if written that way.

If it is desirable to introduce such chords in a piano passage, it will be a better plan to have the lower notes played short, as in arpeggio, and the upper note alone sustained. see (Ex. 2.)

Ex. 2



When a passage like the above is played forte all four notes in each chord should be half notes.

Chords for Mandolin

The effects produced by chords of three and four notes on the mandolin are extremely varied. When played arpeggio they are very delicate, but somewhat more pronounced than the pizzicato on violin.

When played sharply, with one stroke of the plectrum, they are sprightly, gay and vivacious in the higher positions, but forcible and powerful in the first position.
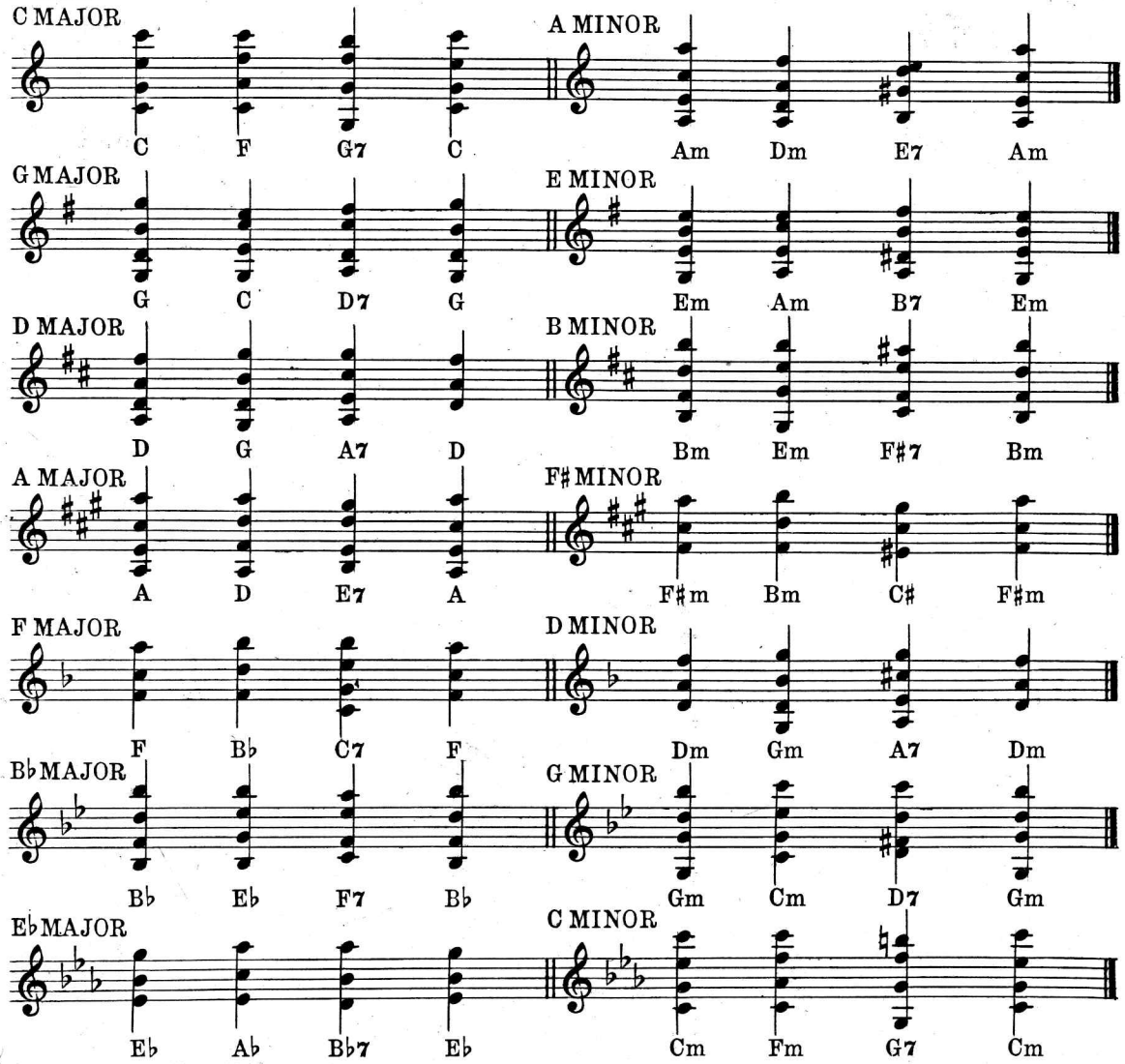
When played as sustained notes, with the tremolo, their character seems to change at once. It is then that the strings seem to discard their metallic nature and give tones like the violin or similar instruments played with the bow.

In aiming for orchestral effects, the arranger has here abundant opportunities for the display of taste and judgment.

A grand and imposing effect is obtained by all the mandolins playing a chord of this description in a slow movement, where both the first and second mandolins tremolo all four strings, gradually increasing to an impressive climax.

Notice a few of these chords. Space being limited, only those most used are shown.

Ex. 3
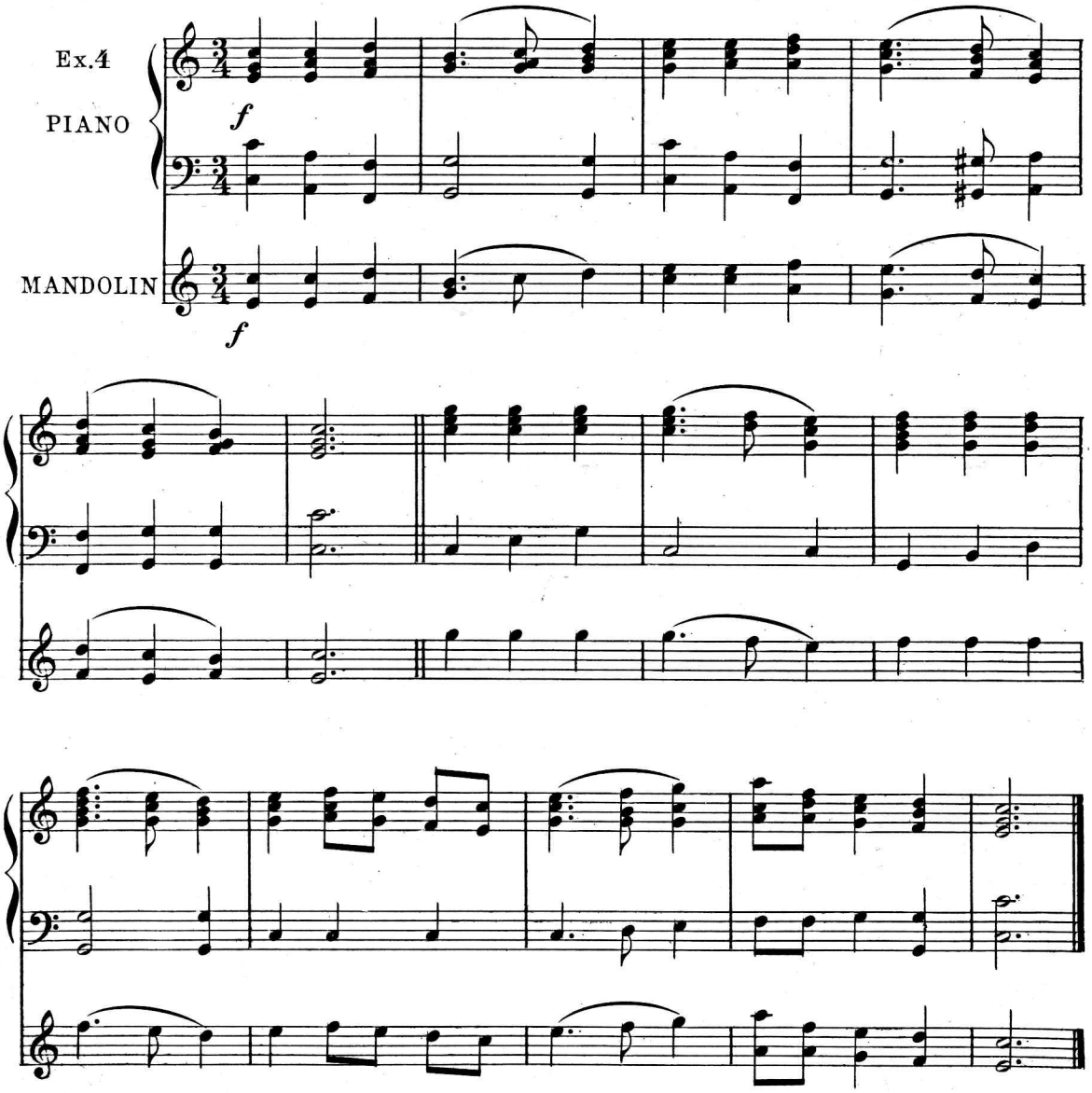


Arranging Mandolin Parts

As previously mentioned ordinary parts for mandolin, containing melodic passages in single notes, are very easy to arrange. In adapting a mandolin solo from a piano score, the top notes are generally sufficient for the purpose, and these melody notes can usually be placed in the same octave with piano. Phrasing on the mandolin should be indicated by slurs over or under the notes.

When double stops are introduced the added notes must be taken from the corresponding chords in the piano, an illustration of which is given below.

America
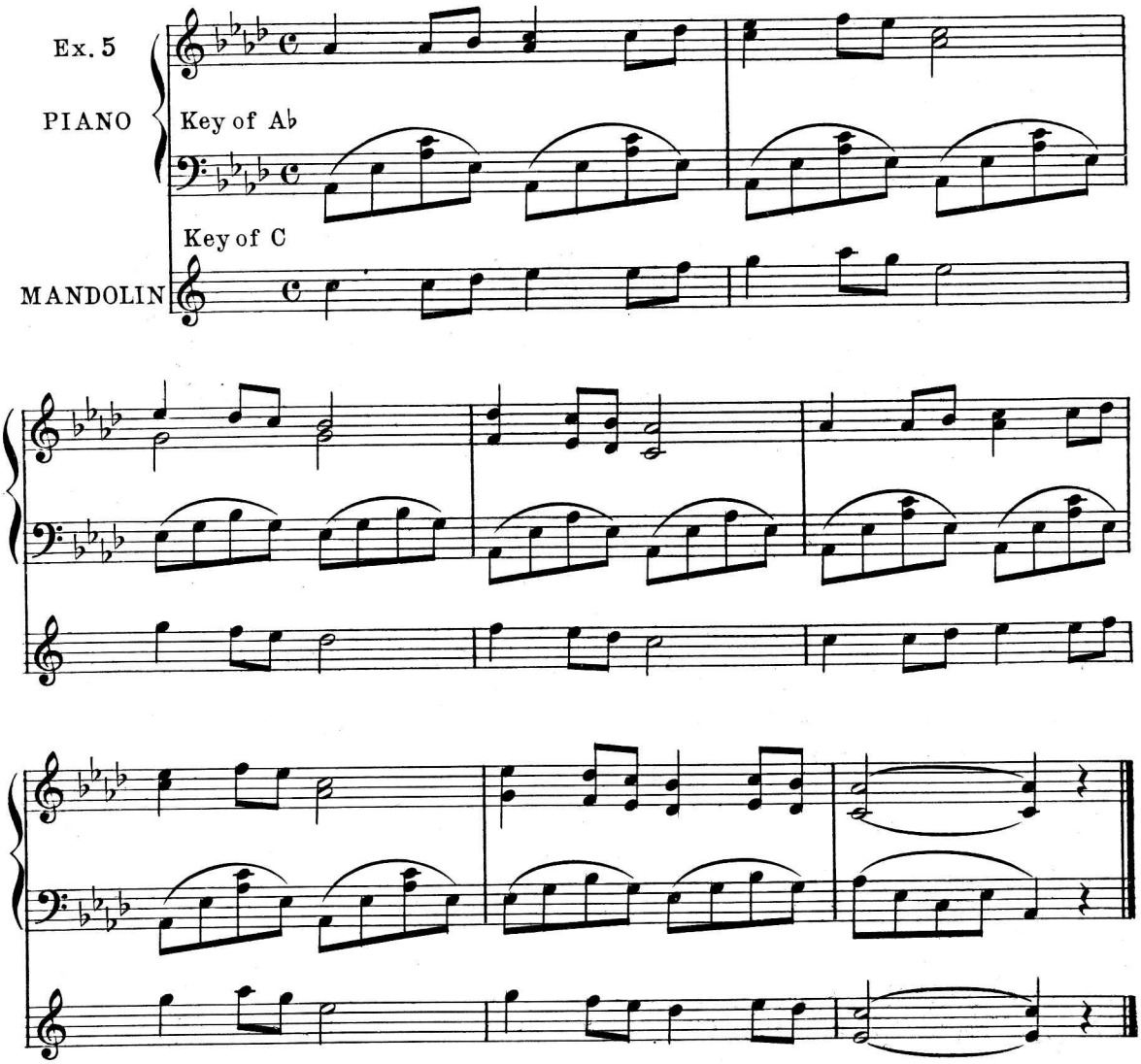


Transposition of Keys

An explanation of transposition will be found in Part 1, Chapter 1, and and also under the preceding instruments in Part 2.

As the prevailing form of mandolin music is single notes, the task of changing keys rarely includes chords. When such chords are necessary the various notes are treated similar to the melody note.

In transposing a mandolin solo from a piano score, the first thing is to write the proper signature for the new key on a single staff in the treble clef, and place the correct time marks. The next point is to find how much higher or lower this new key is from the old one. If the piano key is A-flat and you wish the mandolin to play in C, we find that C is a major third higher than A-flat, consequently every melody note in the piano score must be transposed a major third higher for the mandolin.

Write the following mandolin solo on blank music paper and observe how each note for mandolin in C, is a major third higher than A-flat for piano.
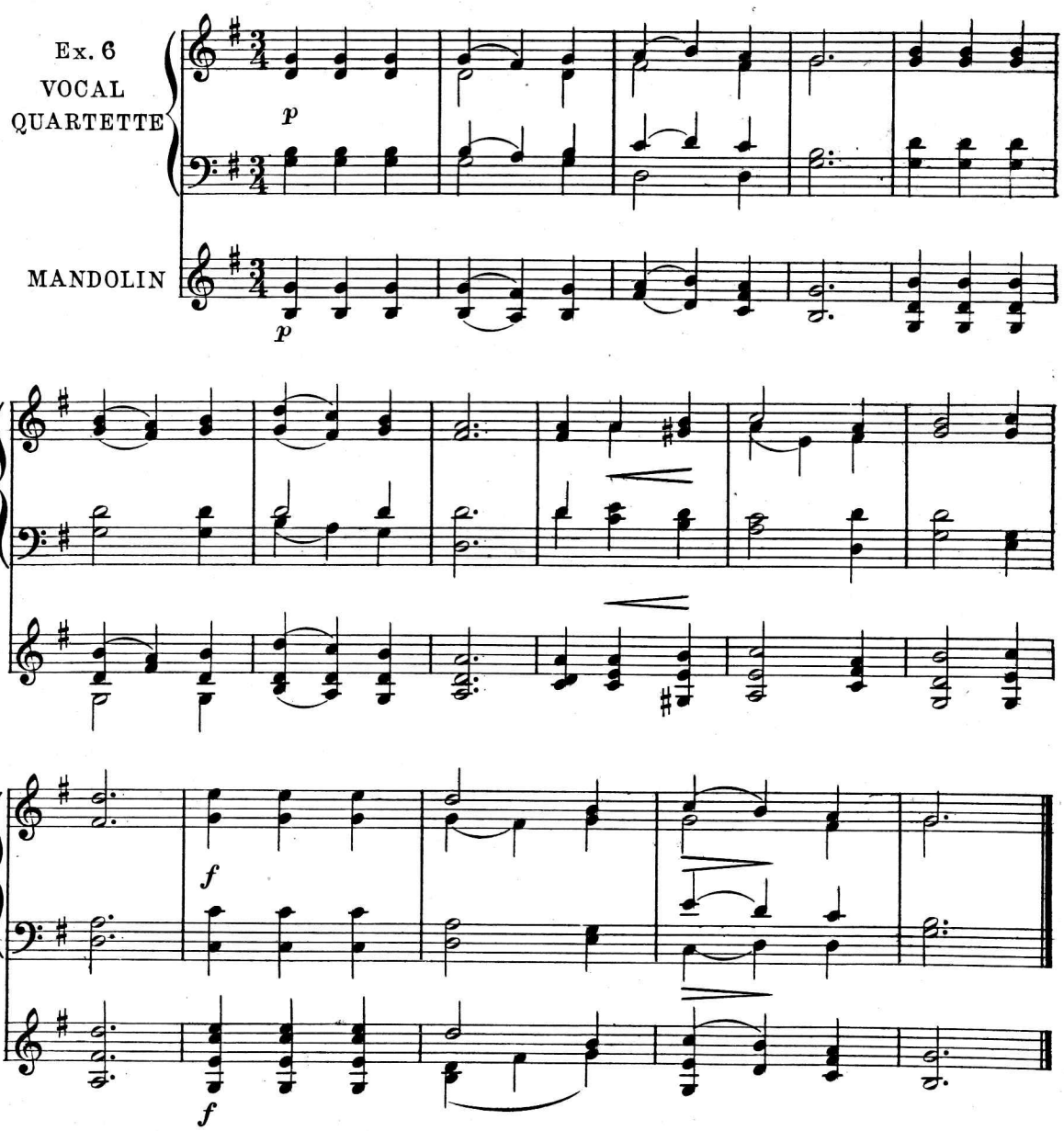


The Duo Style

An unaccompanied mandolin solo, where the melody notes are adorned with other notes played on the lower strings, has become very popular in recent years. It is spoken of as the "duo style" or "trio" and "quartette style."

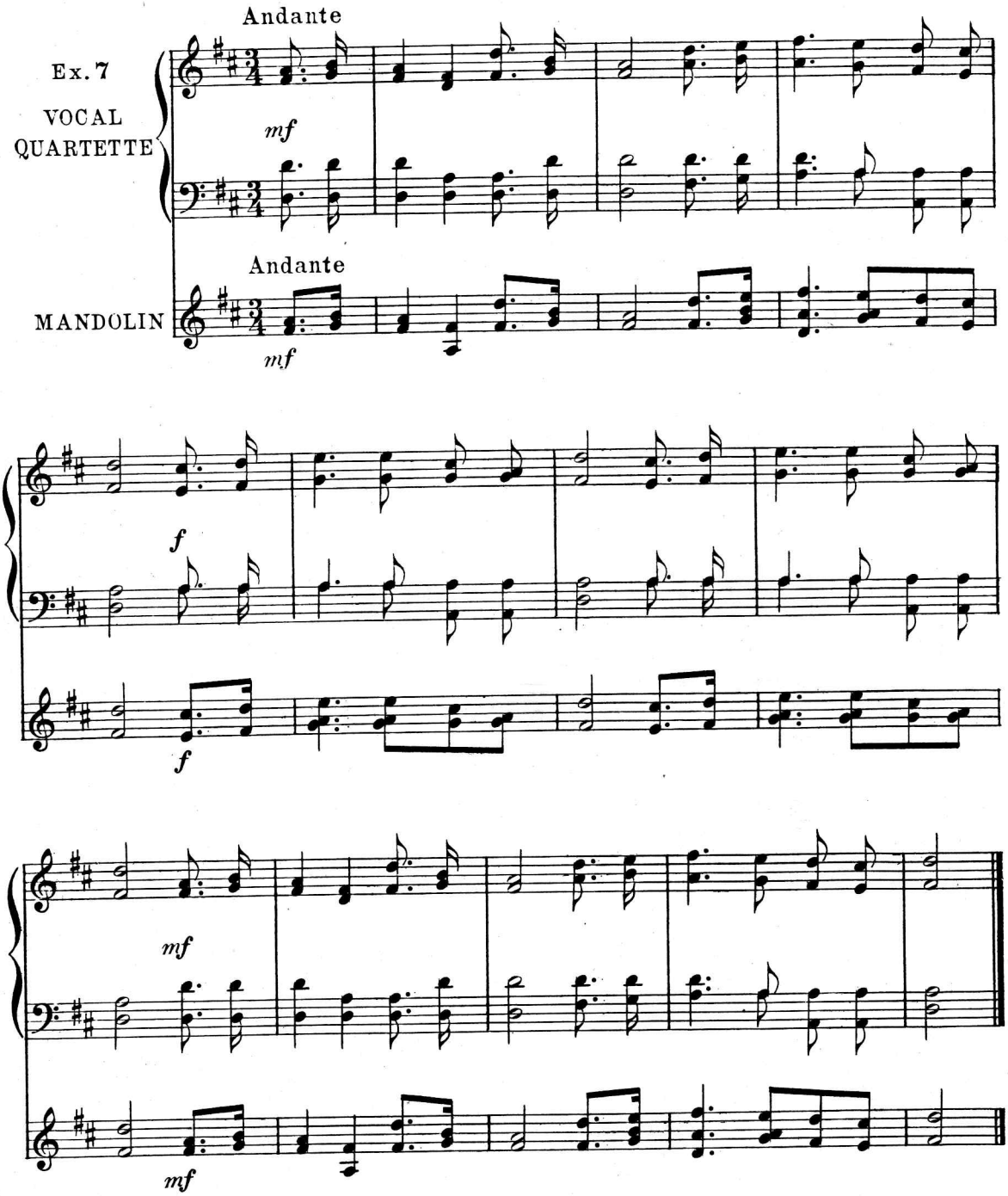
As the mandolin has but four strings it is not always possible to write correct harmonic progression for four voices, and for that reason an occasional three-note chord is advisable. Sometimes only two notes are available, especially if the melody is in a low register.

The best plan for gaining facility in writing duos, is to begin with a printed score for vocal quartette, and select the various notes, from the different voices, which can be easily fingered on the mandolin.
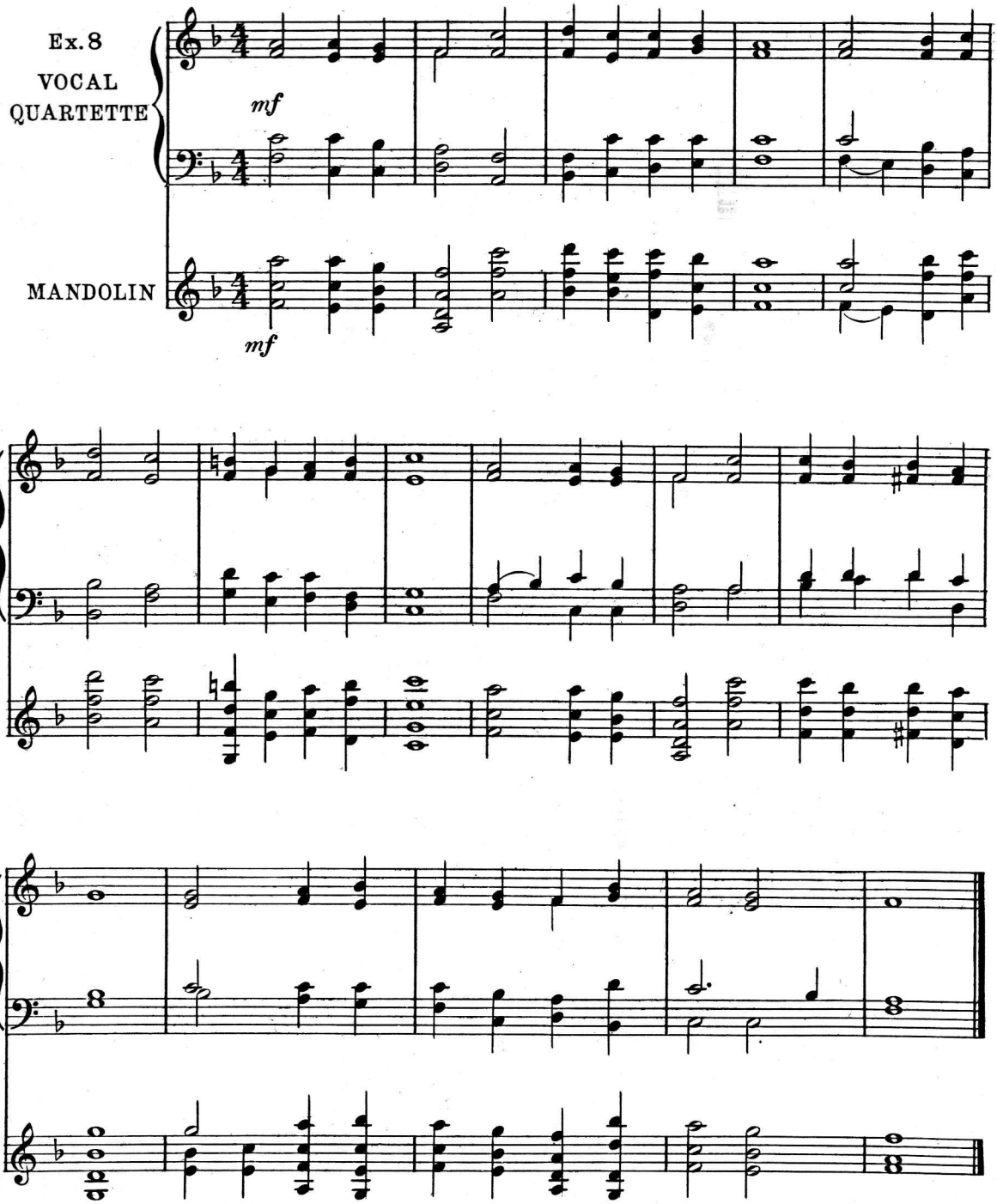
The vocal quartette given below has the mandolin arrangement underneath, Copy this mandolin duo before playing it over.



Music for vocal quartette shows a natural progression of four voices, which can be played quite readily on piano. When arranged for mandolin one or two voices must be omitted occasionally from a chord, in order to suit the mandolin fingerboard. If but two notes can be played one should be the melody and the other a sixth or third below. The last chord should have the tonic in the soprano and the root (if possible) in the bass. When the final chord is so placed that the lowest note cannot be the root, use the third of the chord. Never end a mandolin solo with a six-four chord.



When the voices in a vocal score are low on the staff, it may be necessary to write the mandolin part an octave higher, in order to secure the proper effect needed for the duo. Like all selections of this kind the different voices in each chord must be distributed to suit a mandolin fingerboard.



While orchestra parts for mandolin are generally confined to single notes, the prevailing style for solo work is chords of two, three and sometimes four notes. This enables the performer to sugment the volume of tone and adds greatly to the effect in unaccompanied solos. Observe how the fingering in the following selection has been carefully studied out, so that no akward strings are introduced.
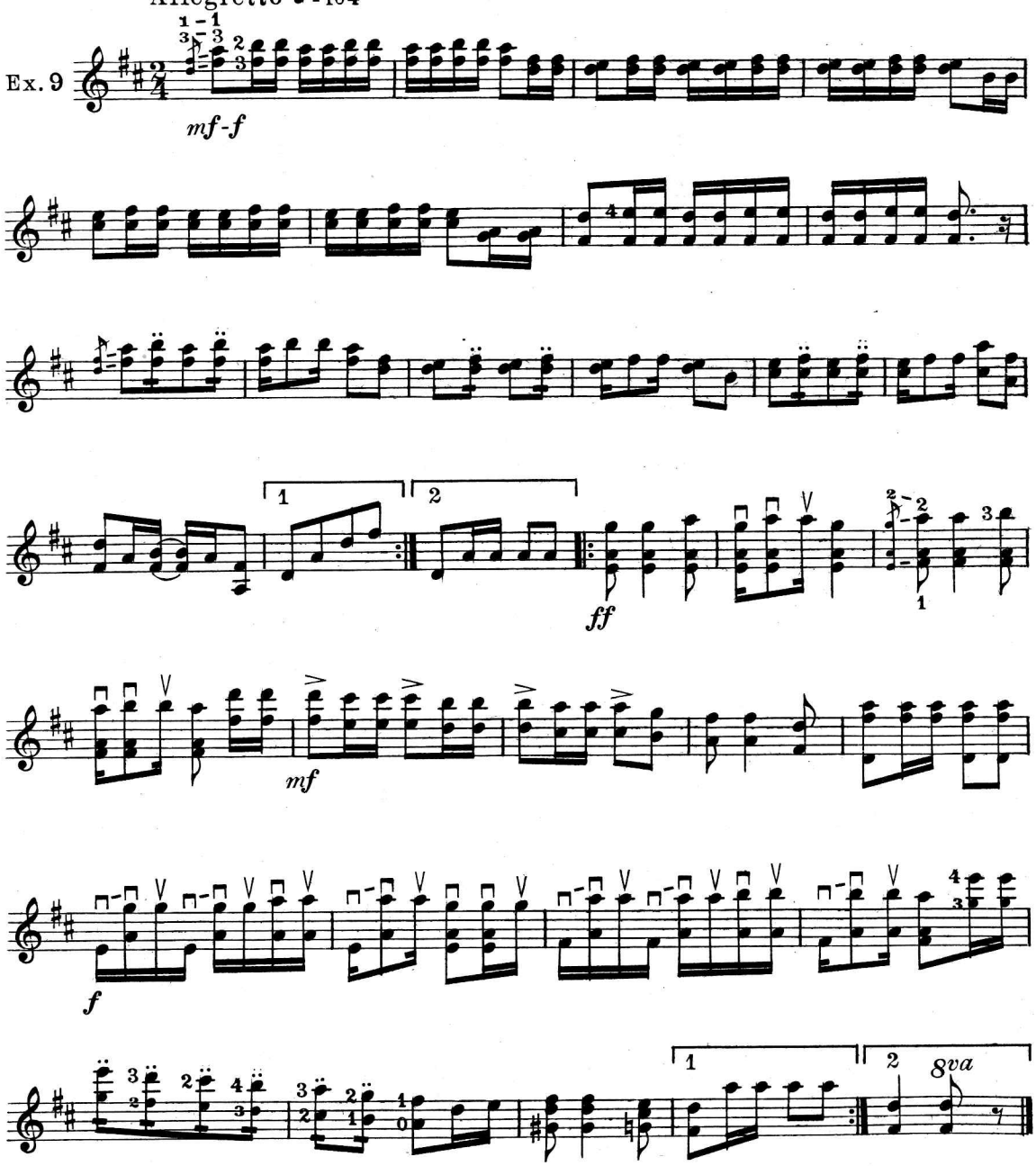
The Optimistic Step

Mandolin

Allegretto ♩ = 104

J. J. DERWIN

Ex. 9
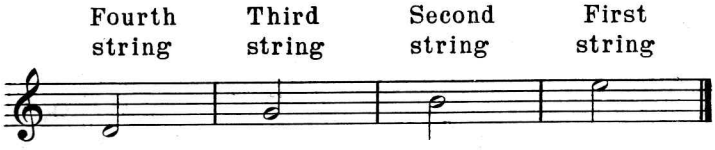


THE GUITAR-UKE

(Frequently called Tenor Guitar)

This is a guitar shaped instrument with a neck similar to that of the Tenor Banjo, The Guitar-Uke is fingered and played in stroke style just like the ukulele, and has four strings which may be either wire, silk or gut.

The Guitar Uke is tuned like the first four strings of regular guitar, as written here, and sound an octave lower than the notes indicated.
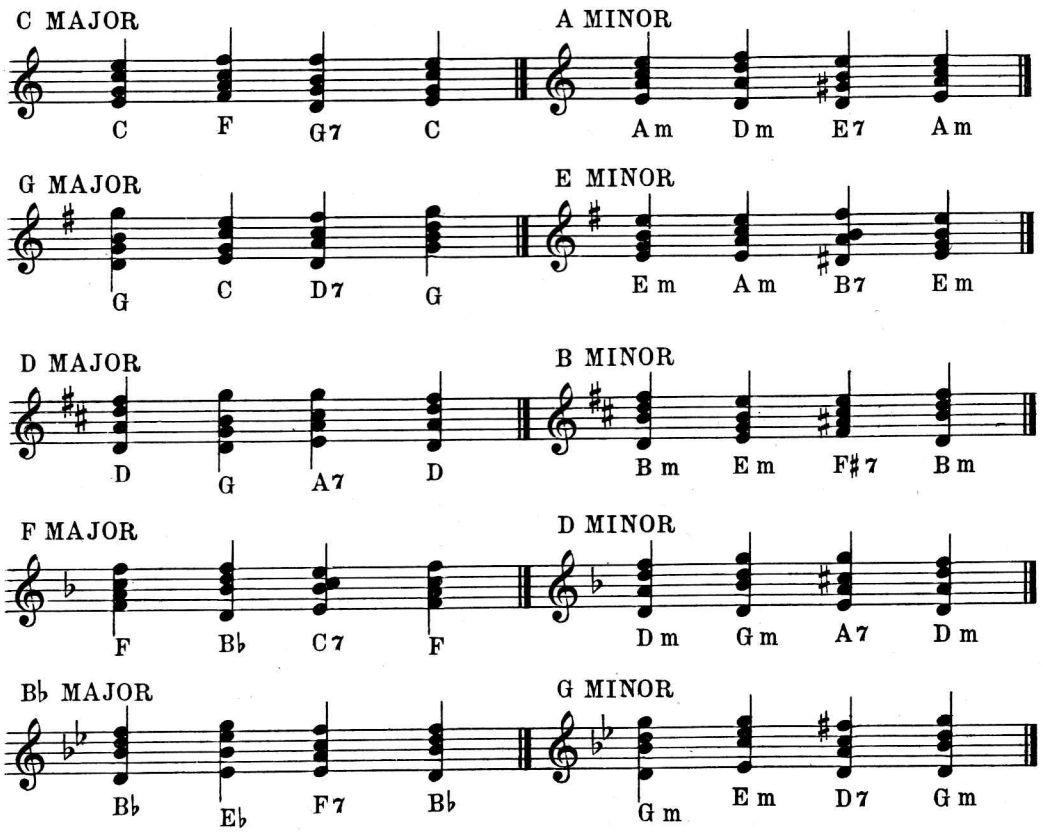


The four notes of any chord assigned to the four upper strings of the regular guitar, can be rendered on the Guitar-Uke and played in ukulele style. The instrument has a deep rich tone and is valuable for accompaniments.

Many orchestra performers are tuning their tenor banjos this way, and the result is better for chords but not so good for solo and obligato parts.

The general order of chords for Guitar-Uke must be close harmony; the strings being tuned so that open harmony becomes very difficult, except when one or two strings can be sounded open in a chord.

As the "stroke" method necessitates the use of all strings, no string can be omitted in any chord. On this account some keys must have a six-four chord at the close of a selection. Several keys, however, may end with root in the bass, such as the key of D which is the most sonorous on the instrument.

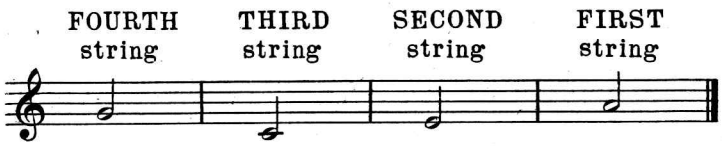
A few of these chords are given below.



THE "TAROPATCH"

This is a small guitar shaped instrument with four double strings tuned in pairs. The method of tuning is relatively the same as ukulele but a whole tone lower. Ukulele players call it the "C tuning."

Gut strings are used on the Taropatch, the actual pitch of these strings being the same as shown here.

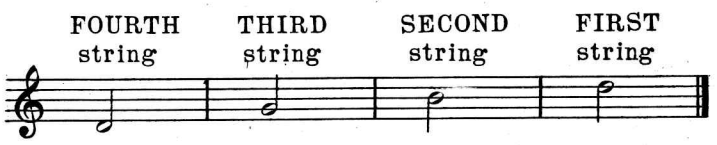


Writing parts for Taropatch follows the same plan as chords for ukulele, except in the matter of keys; the key of C being the favorite and most sonorous one on the Taropatch.

BANJO BASS TO D

On both the Plectrum Banjo and Standard Banjo the bass string may be tuned a whole tone higher than C. It is then said to be "elevated" or "tuned to D," and some performers are using this tuning when the orchestra contains a 'cello or bass violin for playing the bass notes. In nearly all cases when the banjo bass is tuned to D, the bass or fundamental note of the chord, should be taken by some other instrument in the orchestra, thus giving the banjo the chords in the form of an after beat.

With elevated bass the banjo strings are named and read as shown here.
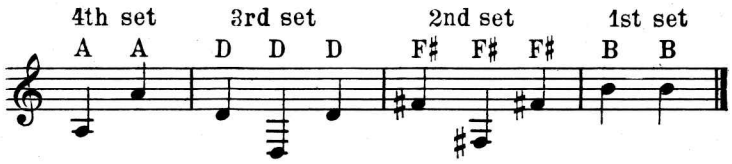


It will be seen that with this method, notes on the bass string must be read differently from the regular tuning, and the left hand fingering considerably altered. As the principal aim is to secure four notes in every chord, no string can be omitted from any combination of notes which comprise the chord. The result follows that some chords will be found very easy and others extremely difficult.

THE "TIPLE"

(Pronounced Tee-plee.)

This resonant addition to the ukulele group, has ten strings tuned in pairs and triplets. The formula of tuning is copied from ukulele with extra strings producing octaves below those on the regular ukulele.

Of the ten strings each pair or triplet is fingered and written for as one string. The actual pitch for tuning the four sets of strings is given here.
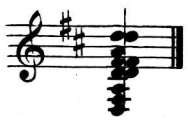


Although a small instrument the Tiple produces an immense volume of tone, owing to the three sets containing octaves, and the first string being a double header tuned in unison.

The chord of D, for example, is written like this for the Tiple:-



but it really gives out this remarkable collection of sounds.



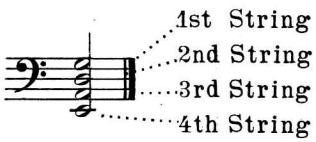
All music written for ukulele can be rendered on the Tiple.

THE MANDO BASS

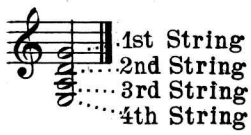
A very large mandolin, oval shaped with a flat back, and generally strung with wire strings. The method of tuning varies but most leaders adopt the regular double bass formula in the real orchestra, which tunes the strings in fourths.

Two systems of notation exist, one in the bass clef and the other in the treble.

Bass clef notation



Treble clef notation



The Mando Bass is for playing the bass or fundamental notes, and when the music is written in the bass clef, the player may read his part from the printed orchestra score for double bass.

When the music is written in the treble clef, the performer usually reads from the guitar part, playing only the lower notes.

THE PLECTRUM ORCHESTRA

Many beautiful effects are possible when the various fretted instruments are assembled in the form of an orchestra, and the music arranged with proper regard for their tonal features. It is obvious that if all the instruments are kept constantly playing throughout a composition, there will be little chance for displaying constrasts of tone.

Considered as a group, the plectrum orchestra can be divided into three sections, each one producing tones quite different from the other.

The first section comprises mandolins, mandolas and mando-cellos, with perhaps the Hawaiian guitar as an associate.

The second division takes in every style and shape of banjos equipped with a calf skin head.

The third division includes guitar, ukulele, harp and harp-guitar.

If the orchestra is large, another section may be added, such as drums, cymbals and other percussion instruments.

Following the plan of the real orchestra for ensemble playing, the mandolin takes the position of a violin and sustains the principal melody, the 2nd mandolin generally being a sixth or third below.

The mandola is best in obligato parts, while the mando-cello is reserved for the low bass and occasional bass solos.

The guitar, ukulele and harp supplies the harmony necessary for an accompaniment, thus forming a complete organization producing the characteristic tones of the mandolin group, harp and guitar.

When instruments of the banjo family are introduced into such an orchestra, we secure tones that bear no resemblance to either mandolin or guitar, consequently the use of a banjo requires great care and discrimination.

Banjo tones being sharp and penetrating, they create the same effect as the brass choir in the orthodox orchestra.
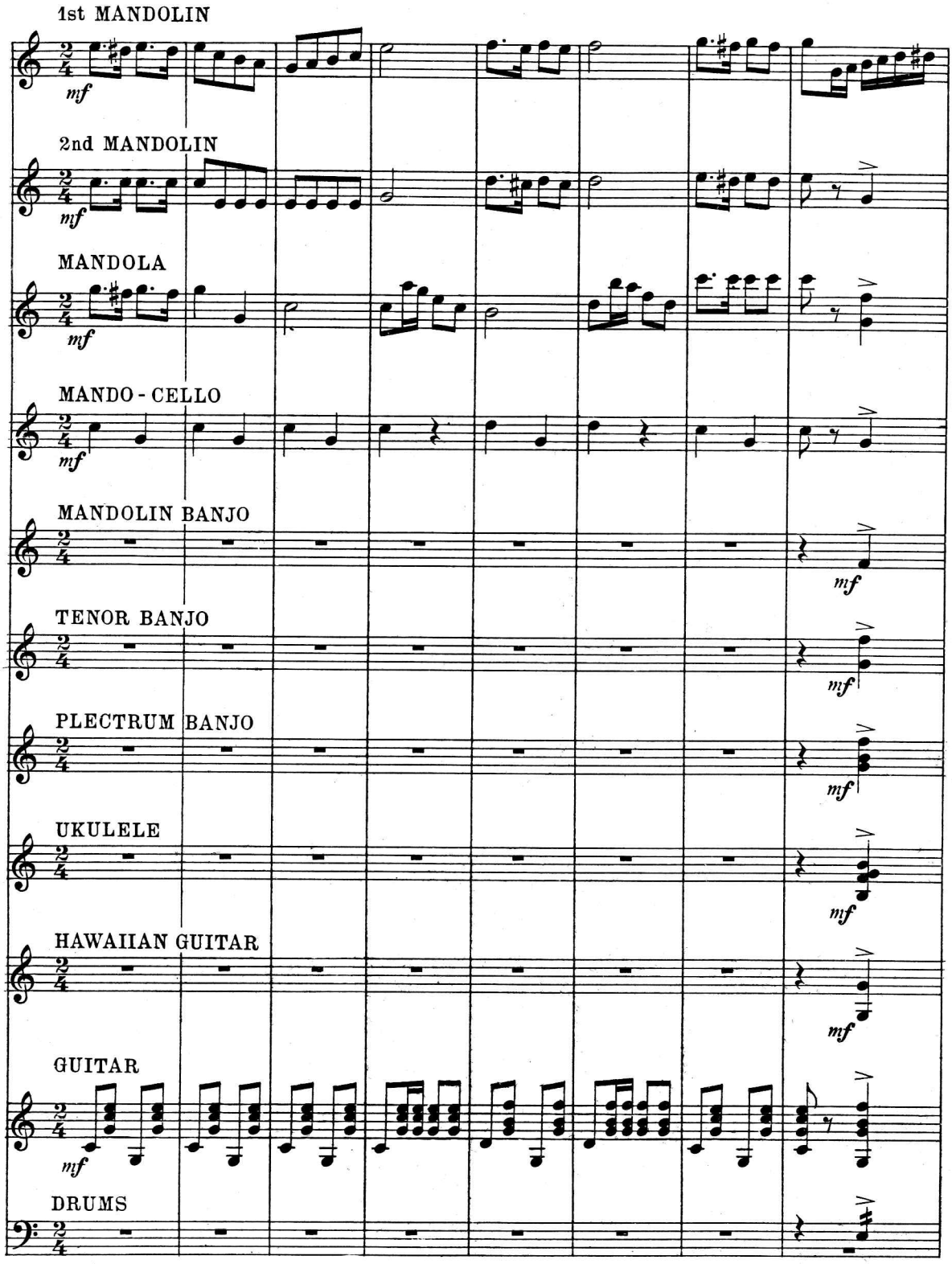
On the next four pages will be found a short extract from "Kamiki March," arranged for the plectrum orchestra.
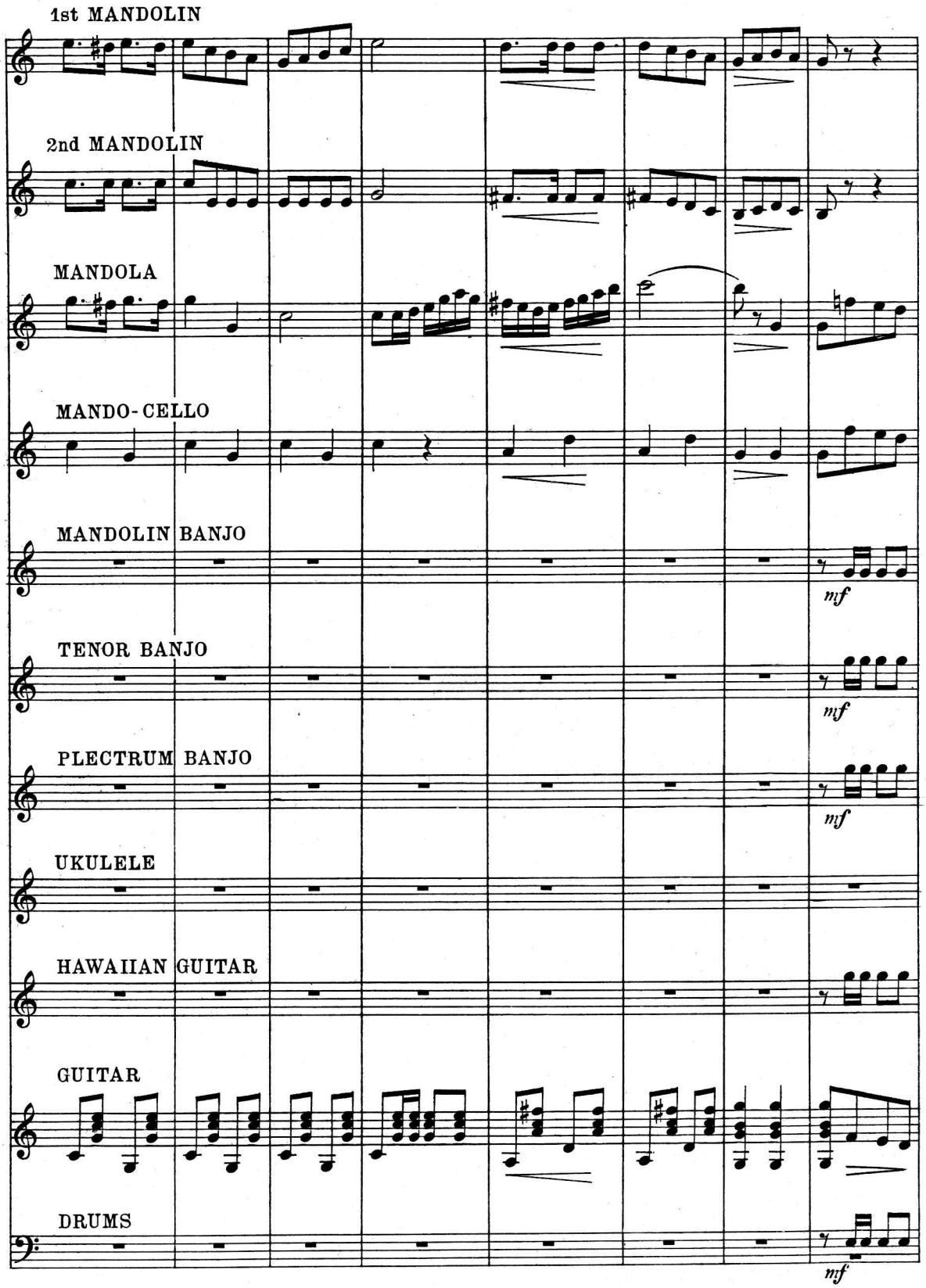
An examination of this score shows that the first 16 measures are taken by the mandolin group and guitars. The 8th measure, however, contains a full chord for all the instruments, thus emphasizing the termination of a phrase. In the 16th measure the banjo division enters with its staccato voice announcing the beginning of a new period, which is taken up and carried all through to the close, by the entire assemblage.
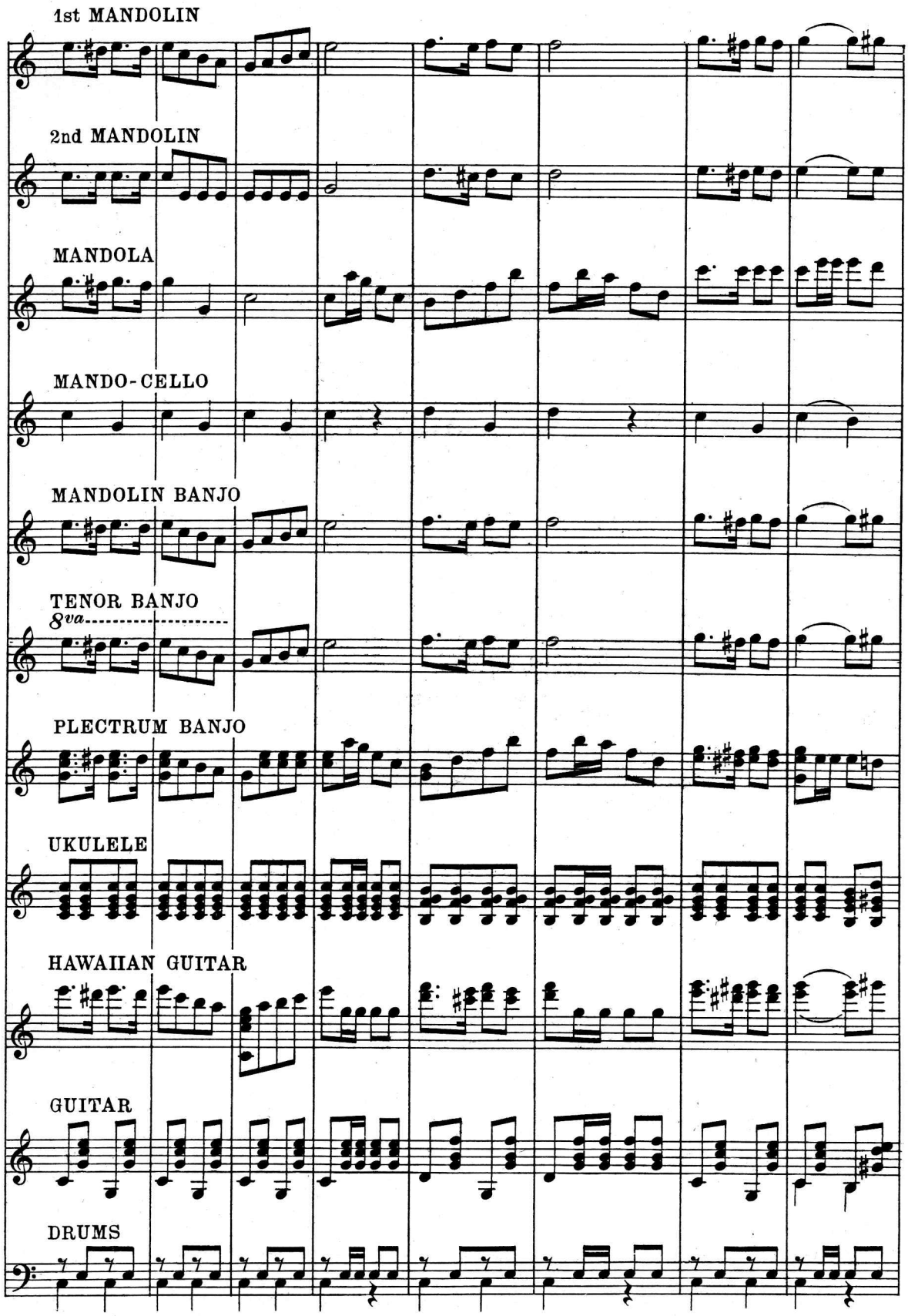
By treating the plectrum orchestra thus, we gain a contrast of tone which is very necessary in a large number of instruments playing together for orchestral effects.
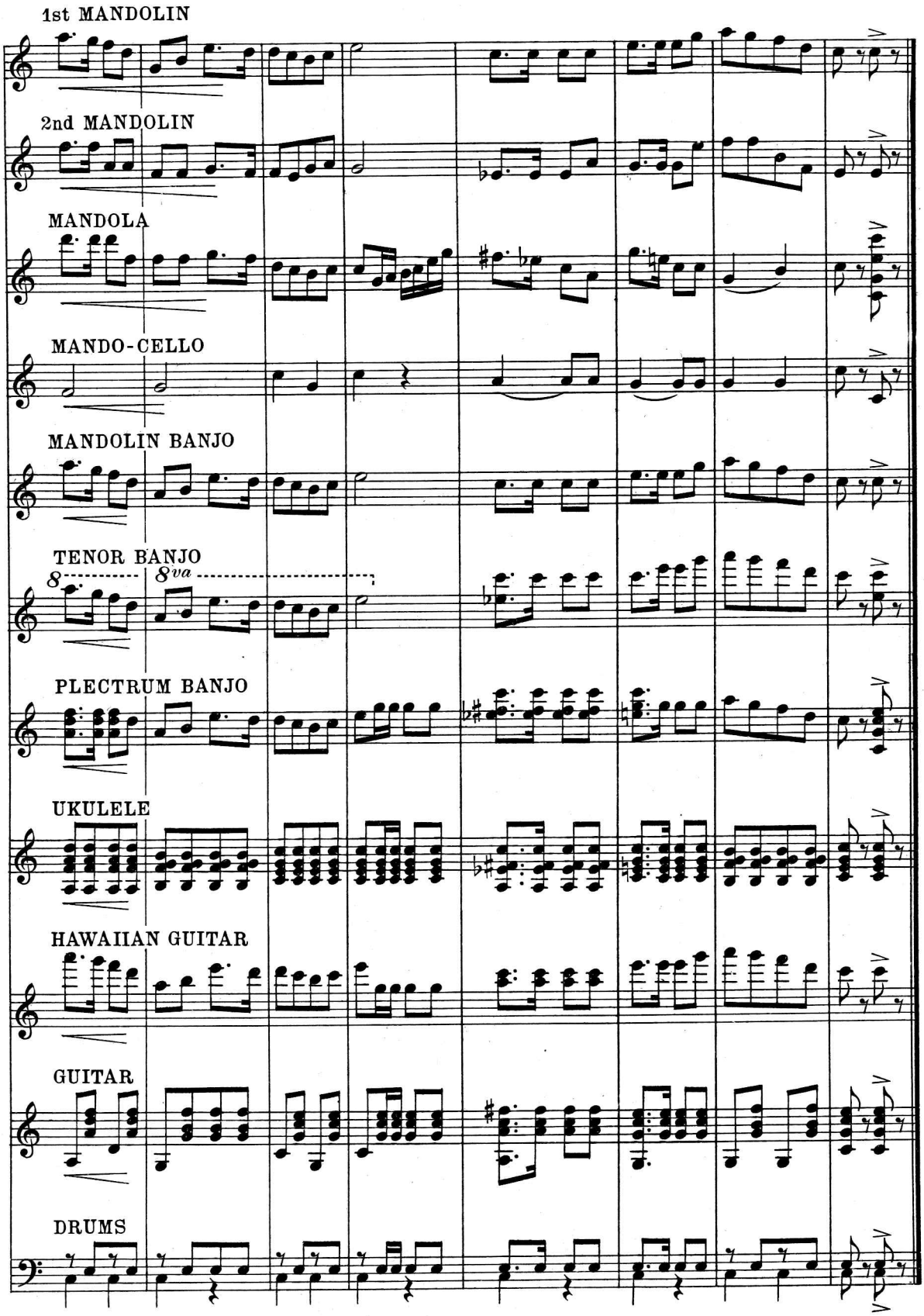
PLECTRUM ORCHESTRA SCORE

From "KAMIKI MARCH" by Wm. J. Smith




1st MANDOLIN
2nd MANDOLIN
MANDOLA
MANDO-CELLO
MANDOLIN BANJO
mf
TENOR BANJO
mf
PLECTRUM BANJO
mf
UKULELE
HAWAIIAN GUITAR
GUITAR
DRUMS
mf


1st MANDOLIN
2nd MANDOLIN
MANDOLA
MANDO-CELLO
MANDOLIN BANJO
TENOR BANJO
8va
PLECTRUM BANJO
UKULELE
HAWAIIAN GUITAR
GUITAR
DRUMS


1st MANDOLIN
2nd MANDOLIN
MANDOLA
MANDO-CELLO
MANDOLIN BANJO
TENOR BANJO
8va
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